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Ontario. Legislature

SESSIONAL PAPERS.

VOL. XLIII.—PART IV.

THIRD SESSION

OF THE

TWELFTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO.

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SESSION 1911.

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No. 2.... Estimates—Supplementary—for the service of the Province for the year ending 31st October, 1911. Presented to the Legislature, 31st January, 1911. *Printed.* Further Suplementary Estimates for year ending 31st October, 1911. Presented to the Legislature, 13th March, 1911. *Printed.* Estimates for the year ending 31st October, 1912. Presented to the Legislature, 20th March, 1911. *Printed.*

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No. 4... Report of the Bureau of Mines, for the year 1910. Presented to the Legislature, 28th February, 1911. *Printed.*

No. 5... Report of the Inspector of Division Courts, for the year 1910. Presented to the Legislature, 16th February, 1911. *Printed.*

No. 6... Report of the Inspector of Legal Offices, for the year 1910. Presented to the Legislature, 10th March, 1911. *Printed.*

No. 7... Report of the Inspector of Registry Offices, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 8... Report of the Provincial Municipal Auditor, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 9... Report of the Commissioners for the Queen Victoria Niagara Falls Park, for the year 1910. Presented to the Legislature, 24th February, 1911. *Printed.*

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No. 10... Report of the Inspector of Insurance and Registrar of Friendly Societies, for the year 1910. Presented to the Legislature, 3rd February, 1911. *Printed.*

No. 11... Financial Statements made by Loan Corporations, Building Societies, Loaning Land Companies and Trust Companies, for the year 1910. Presented to the Legislature, 3rd February, 1911. *Printed.*

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No. 13... Report of the Game and Fisheries Department, for the year 1910. Presented to the Legislature, 20th February, 1911. *Printed.*

No. 14... Report on Highway Improvement in the Province, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 15... Report of the Bureau of Labour, for the year 1910. Presented to the Legislature, 22nd March, 1911. *Printed.*

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No. 16... Report of the Minister of Education, for the year 1910. Presented to the Legislature, 22nd February, 1911. *Printed.*

No. 17... Report of the Board of Governors of the University of Toronto, for the year ending 30th June, 1910. Presented to the Legislature, 25th January, 1911. *Printed.*

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No. 18... Report of the Secretary and Registrar of the Province, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed*

No. 19... Report upon the Registration of Births, Marriages and Deaths, for the year 1909. Presented to the Legislature, 10th March, 1911. *Printed.*

No. 20... Report of the Provincial Board of Health, for the year 1910. Presented to the Legislature, 23rd February, 1911. *Printed.*

No. 21... Report on the Hospitals for the Insane, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 22... Report on the Hospitals for Idiots and Epileptics, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 23... Report upon the Feeble-Minded, for the year 1910. Presented to the Legislature, 22nd March, 1911. *Printed.*

No. 24... Report upon the Hospitals and Charities, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

No. 25... Report upon the Common Gaols and Prisons, for the year 1910. Presented to the Legislature, 15th March, 1911. *Printed.*

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No. 26... Report upon Neglected and Dependent Children, for the year 1910. Presented to the Legislature, 8th March, 1911. *Printed.*

No. 27... Report upon the Operation of the Liquor License Acts, for the year 1910. Presented to the Legislature, 15th March, 1910. *Printed.*

No. 28... Report of the Department of Agriculture, for 1910.*
*This Report was printed in the Sessional Papers of 1910—No. 28.

No. 29... Report of the Agricultural College and Agricultural Farm, for the year 1910. Presented to the Legislature. 16th March, 1911. *Printed.*

No. 30... Report of the Ontario Vetrinary College, for the year 1910. Presented to the Legislature, 20th March, 1911. *Printed.*

No. 31... Report of the Ontario Agricultural and Experimental Union, for the year 1910. Presented to the Legislature, 16th March, 1911. *Printed.*

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No. 32... Report of the Fruit Growers' Association of Ontario. for the year 1910. Presented to the Legislature, 16th March, 1911. *Printed.*

No. 33... Report of the Fruit Branch of the Department of Agriculture, for the year 1910. Presented to the Legislature. 16th March, 1911. *Printed.*

No. 34... Report of the Ontario Vegetable Growers' Association, for the year 1910 Presented to the Legislature, 20th March. 1911. *Printed.*

No. 35... Report of the Corn Growers' Association, for the year 1910. Presented to the Legislature, 20th March. 1911. *Printed.*

No. 36... Report of the Entomological Society of Ontario, for the year 1910. Presented to the Legislature, 16th March. 1911. *Printed.*

No. 37... Report of the Ontario Bee-Keepers' Associations. for the year 1910. Presented to the Legislature, 20th March. 1911. *Printed.*

No. 38... Report of the Dairymen's Associations of Ontario, for the year 1910. Presented to the Legislature. 16th March, 1911. *Printed.*

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No. 39.... Report of the Live Stock Associations of Ontario, for the year 1910. Presented to the Legislature, 3rd February, 1911. *Printed.*

No. 40... Report of the Farmers' Institutes of Ontario, for the year 1910. Presented to the Legislature, 26th January, 1911. *Printed.*

No. 41... Report of the Women's Institutes of Ontario, for the year 1910. Presented to the Legislature, 26th January, 1911. *Printed.*

No. 42... Report of the Poultry Institute, for 1910.*
* This Report was not presented in the Session of 1911.

No. 43... Report of the Agricultural Societies of Ontario, and the Convention of the Ontario Association of Fairs and Exhibitions, for the year 1910. Presented to the Legislature, 26th January, 1911. *Printed.*

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No. 44... Report of the Horticultural Societies of Ontario, for the year 1910. Presented to the Legislature, 20th March, 1911. *Printed.*

No. 45... Report of the Bureau of Industries, for the year 1910. Presented to the Legislature, 20th March, 1911. *Printed.*

No. 46... Report of the Inspectors of Factories, for the year 1910. Presented to the Legislature, 20th March, 1911. *Printed.*

No. 47... Report of the Temiskaming and Northern Ontario Railway, for the year ending 31st October, 1910. Presented to the Legislature, 25th January, 1911. *Printed.*

No.. 48... Report of the Hydro-Electric Power Commission, for the year 1910. Presented to the Legislature, 22nd March, 1911. *Printed.*

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No. 49... Report of the Ontario Railway and Municipal Board, for the year 1910. Presented to the Legislature, 28th February, 1911. *Printed.*

No. 50.... Supplementary Return from the Records of Elections subsequent to General Elections in 1908. Presented to the Legislature, 24th January, 1911. *Printed.*

No. 51... Copies of Regulations and Orders in Council respecting Department of Education. Presented to the Legislature, 25th January, 1911. *Not Printed.*

No. 52... Report on the State of the Legislative Library. Presented to the Legislature, 31st January, 1911. *Printed.*

No. 53... Report *re* Game Commission.*
* *Not brought down.*

No. 54... Statements of Provincial Auditor under Audit Act. Presented to the Legislature, 25th January, 1911. *Printed.*

No. 55... Copies of Orders in Council under provisions of Surrogate Courts Act. Presented to the Legislature, 3rd February, 1911. *Not Printed.*

No. 56... New Ontario, Situation, Farms, etc. Presented to the Legislature, 3rd February, 1911. *Printed for distribution only.*

No. 57... Dairying in Ontario. Presented to the Legislature, 3rd February, 1911. *Printed for distribution only.*

No. 58... Farming Opportunities in Ontario. Presented to the Legislature, 3rd February, 1911. *Printed for distribution only.*

No. 59... Women's Institutes, Hand-Book. Presented to the Legislature, 9th February, 1911. *Printed for distribution only.*

No. 60... Report on Infant Mortality. Presented to the Legislature, 7th March, 1911. *Printed.*

No. 61... Return to an Order of the House of the 21st day of February, 1911, for a Return shewing: The number of officials, clerks and employees in the various branches of the Provincial Secretary's Department on (*a*) February 1st, 1905; (*b*) January 1st, 1911; with the salaries in each case. The additional work (if any) imposed on each branch and a statement of what has been accomplished thereby. Presented to the Legislature, 15th March, 1911. Mr. *McCart.* *Not Printed.*

No. 62... Return to an Order of the House of the 20th day of February, 1911, for a return shewing: (*a*) For what commodities supplied to the Public Institutions under the control of the Province of Ontario the Government asks for tenders by advertisement in the public press; (*b*) The commodities supplied to each of the Public Institutions under the control of the Province of Ontario for which tenders are not invited by advertisement in the public press; (*c*) and what system of purchase is adopted in each case under (*a*). Presented to the Legislature, 15th March, 1911. Mr. *Kohler.* *Not Printed.*

No. 63... Statement of distribution of Revised and Sessional Statutes, for the year 1910. Presented to the Legislature, 15th March, 1911. *Not Printed.*

No. 64... Report of Bureau of Colonization, for the year 1910. Presented to the Legislature, 16th March, 1911. *Printed.*

No. 65... Report, Provincial Archives, for the year 1910. Presented to the Legislature, 20th March, 1911. *Printed.*

No. 66... Return to an Order of the House of the Tenth day of February, 1911, a Return shewing: (1) The amount expended on the revision of the Statutes from the 14th day of February, A.D. 1910; (2) To whom and on what account were the payments made; (3) The total cost of revision to date and shewing: (4) When will the revision be completed. Presented to the Legislature, 20th March, 1911. Mr. *Proudfoot. Not Printed.*

No. 67... Return to an Order of the House of the Twenty-eighth day of February, 1911, for a Return shewing the uniform system of accounting in respect to the various features of the dealing in electric energy by municipalities having contracts with the Hydro-Electric Power Commission which has been approved by the Government. Presented to the Legislature, 20th March, 1911. Mr. *MacKay* (*Grey.*) *Not Printed.*

No. 68... Return to an Order of the House of the Twenty-eighth day of February, 1911, for a Return shewing: (*a*) The institutions under the control of the Province which are supplied with electric power by the Hydro-Electric Power Commission; (*b*) The amount of power supplied in each case, and the date when such power was first supplied; (*c*) The price charged to each such institution for power; (*d*) The cost of installation in each case; (*e*) The system of supplying power displaced by the supplying by the said Commission; (*f*) The cost of the same amount of power under the displaced system; (*g*) The cost price of the plant rendered useless by the change in each case; and (*h*) What other institutions under the control of the Province are to be supplied with electric power by the said Commission. Presented to the Legislature, 20th March, 1911. Mr. *MacKay* (*Grey.*) *Not Printed.*

No. 69... Return to an Order of the House of the Twenty-eighth day of February, 1911, for a Return shewing: (*a*) The damage done to the machinery or equipment in any and all transformer stations of the municipalities contracting with the Hydro-Electric Power Commission since the said Commission commenced to transmit power; (*b*) The dates upon which such damage was occasioned and the extent in money of the damage to machinery or equipment in each case; (*c*) The names of the contractors supplying or installing the machinery or equipment so damaged; (*d*) The cause of the damage in each case, together with all reports received by the Government or any member thereof or the said Commission as to the cause in each case; (*e*) Upon whom will the loss in each case fall—Upon the said Commission, upon the contractor or upon the interested municipality. Presented to the Legislature, 20th March, 1911. Mr. *MacKay* (*Grey.*) *Not Printed.*

No. 70... Return to an Order of the House of the Twenty-eighth day of February, 1911, for a Return shewing: (*a*) How much power has been called for by the Hydro-Electric Power Commission under its agreement

with the Ontario Power Company, giving date of each notice requiring delivery of power, and the amount called for by each notice; (*b*) The amount of power for which the said Commission is now and has been from time to time liable to pay; (*c*) The amount of Power annually taken from time to time from the Ontario Power Company; (*d*) The amount of power actually transmitted from time to time by the said Commission; (*e*) The dates and duration of all interruptions to the delivery of power by the said Commission to the various contracting municipalities; (*f*) The cause of each such interruption, and all reports thereon received by the said Commission or the Government or any member thereof; (*g*) The amount, if any, of the rebate allowed or to be allowed each contracting municipality in consequence of the interruption of the delivery of power. Presented to the Legislature, 20th March, 1911. Mr. *MacKay* (*Grey.*) *Not Printed.*

No. 71.... Return to an Order of the House of the Twenty-first day of February, 1911, for a Return shewing: (*a*) The municipalities which have entered into contracts with the Hydro-Electric Power Commission for the supply of power; (*b*) The amount of power contracted for by each such municipality; (*c*) The names of the municipalities to which power is now actually being supplied, with the date upon which power was first supplied, the amount of power now supplied, and the amount of power actually used or sold by each such municipality; (*d*) The actual amount for which such municipality being supplied with power has become liable to the Commission, and the date from which such liability runs. Presented to the Legislature, 20th March, 1911. Mr. *MacKay* (*Grey.*) *Not Printed.*

No. 72... Return to an Order of the House of the Eighth day of February, 1911, for a Return, shewing the names of all temporary or extra game wardens appointed during the seasons 1909 and 1910, with the residence and description of each appointee, the amount paid to each for services and expenses, the locality assigned to each, and the number and general nature of reports received from such game wardens. Presented to the Legislature, 20th March, 1911. Mr. *Elliott. Not Printed.*

No. 73... Return to an Order of the House of the Twenty-seventh day of February, 1911, for a Return shewing (1) A copy of the advertisement calling for tenders for the printing, publishing and supplying of "Ontario Readers"; (2) Copies of all tenders received; (3) Copies of correspondence between the Government of Ontario or any official thereof and any tenderer or tenderers; (4) A copy of the contract entered into on behalf of the Government for the printing, publishing and supplying of "Ontario Readers"; (5) A detailed statement of the cost to the Government of supplying to the publishers electro-plates for each Reader; (6) Comparison of the prices of the old textbooks in the Public and High Schools with those of the corresponding text-books in the new series; (7) Amounts saved to purchasers,

estimated on the basis of previous sales and attendance; (8) Methods of safeguarding the quality of the materials entering into the construction of the text-books and their printing and binding; (9) What provinces, if any, have adopted books of Ontario's new series. Presented to the Legislature, 20th March, 1911. Mr. *Musgrove. Printed.*

No. 74... Return to an Order of the House of the Twenty-first day of February, 1911, for a Return shewing (1) From what date is the Hydro-Electric Commission entitled to payment by the City of Toronto for electrical power contracted for by the City from the said Commission, and if (2) The Commission has been paid the amount owing by the City from said date; (3) What amount *per* month has the City of Toronto become liable to pay to the Hydro-Electric Commission for such power, and from what date. If not paid the reason therefor, and is the City liable to pay interest on such arrears. Presented to the Legislature, 21st March, 1911. Mr. *Proudfoot. Not Printed.*

REPORT

OF THE

Minister of Public Works

FOR THE

PROVINCE OF ONTARIO

FOR THE

TWELVE MONTHS ENDING 31st OCTOBER

1910

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO

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To His Honour, J. M. Gibson, K.C., LL.D., *Lieutenant-Governor of the Province of Ontario.*

Sir,—I have the honour to submit to you, as required by Statute, the Annual Report on the Works under the control of the Public Works Department, comprising the Reports of the Deputy-Minister, the Architect, the Engineer, the Colonization Roads Branch and the Accountant and Law Clerk for the twelve months ending 31st of October, 1910.

I have the honour to be, Sir,

Your obedient servant,

J. O. Reaume,

Minister of Public Works.

Department of Public Works, Toronto, 13th February, 1911.

REPORT

OF THE

Deputy Minister of Public Works

HONOURABLE J. O. REAUME, *Minister of Public Works, Ontario.*

SIR,—I have the honour to transmit to you Reports for the fiscal year ending October 31st, 1910, of the Provincial Architect, the Provincial Engineer, the Colonization Roads Branch and the Accountant and Law Clerk of the Department of Public Works.

The erection of a residence for the Lieutenant-Governor in a more desirable district of the city has engaged the attention of the Department, the present site having become entirely unsuitable in its surroundings, owing to the proximity of railway tracks and factories, due to the growth of the city since the erection of the present residence. Plans are nearing completion, by the Provincial Architect, of a house that will both in its surroundings and its architecture be a credit to the Province.

Extraordinary expenditures on Public Buildings have been necessary during the year, the sum of $895,923.10 being expended on the erection and maintenance of Public Buildings. The principal buildings under erection were the north wing of the Parliament Buildings, for the Legislative Library, the Railway and Municipal Board, the Hydro-Electric Commission and the Department of Education; the reconstruction of the west wing of the Parliament Buildings, which, with an additional story, will give much needed accommodation; an addition to Osgoode Hall for the Court of Appeal, Master-in-Chambers Court, the Judges and Court officials; the New Prison Farm at Guelph and a new Court House in the District of Kenora.

The ordinary expenditure for repair and reconstruction in connection with the public buildings of the Province has received careful attention.

Under the direction of the Provincial Engineer there have been erected twelve new steel bridges on concrete substructures, at the following places; over the Magnetawan River, Perry Township; the Burnt River at Gooderham; Black Creek in Dalton Township; Hoc-Roc River in Muskoka Township; Creek in Stephenson Township; Rosseau River in Cardwell Township; Amable Du Fond River at Eau Claire; Wissi-Wassa River, Himsworth Township; South River at Nipissing Village; Birch Creek near Webbwood; Hoeffler Creek near Massey; Thessalon River at Rydal Bank.

A reinforced concrete span was built over the Root River near Sault Ste. Marie; two steel bridges were erected over the Sault Ste. Marie Branch of the Canadian Pacific Railway on the Sudbury-Soo Trunk Waggon road; one in the Township of Hallam and the other in the Township of Baldwin. A number of wooden bridges were erected, the principal ones being over the Black River at Matheson; the Veuve River near Markstay; the Winnipeg River bridge near Keewatin.

The drainage of the Rainy River District was continued during the year. Improvements were made in several small streams in Springer Township, McPher-

son Township, Rama Township, Bonfield Township; also on the Mississippi River, the Saugeen River and the Nottawasaga River. The following townships received aid under the provisions of the Provincial Drainage Aid Act: Eldon, Elma, Enniskillen, Osnabruck, Pelee Island, Rochester and Sandwich East.

Dredging operations were carried on in the Muskoka Lakes for the full season of navigation, and the maintenance of locks, dams and bridges received careful attention.

Under the Colonization Roads Branch, 193 miles of new road have been constructed; 1189 miles have been repaired and 101 bridges, aggregating a length of 5983 feet have been constructed.

Eighty-one municipalities have taken advantage during the year of the "Colonization Roads Act," under which the Government contributes a portion of the cost of the roads, usually one-half of the expenditure, the Government proportion amounting to $80,500.00.

The employment of prisoners in the construction of roads was tried with much success, about one hundred prisoners being engaged on road building from Matheson and Kelso into the Porcupine gold mining district. Twenty-three miles of new road was stumped, grubbed and cleared, 16 miles were graded and cross-laid, and a substantial bridge erected over the Way-tay-beg River. The saving effected in the construction of these roads amounted to probably $5,000.00. The benefit to the physical condition of the men from living a useful life in the open with good, substantial food instead of being confined in a crowded district goal, cannot be estimated. The moral effect on the men was very markedly beneficial. Upon the discharge of the prisoners, they were given an opportunity to continue to work on the roads and were paid the current rate of wages in the district and many were able to secure useful employment in the mining camps.

All of which is respectfully submitted.

I have the honour to be, Sir,

Your obedient servant,

R. P. Fairbairn,

Deputy Minister of Public Works.

Toronto, February 13th, 1911.

Present Government House.
Front view.

REPORT OF THE ARCHITECT.

To the Hon. J. O. Reaume,

Minister of Public Works, Ontario.

Sir,—I have the honour to submit my Annual Report on the Buildings being erected, Contracts completed and other Works carried out during the last twelve months.

Government House.

The Residence has been kept in the usual good order, repairs generally having been made when required. The Steward's Lodge, Gardener's Cottage, Coach House and Stable have also been kept in good repair. Repairs have been made to the Conservatory and Greenhouses. Considerable care and attention has been given by the Gardener and staff, who have succeeded in growing a variety of plants that compare favourably with any of the many private conservatories and greenhouses in this city. The Grounds have been kept up to their usual state of efficiency. Furniture has been renewed where required and recovered where considered advisable.

The Government House property, including the grounds and buildings, was sold to the Canadian Pacific Railway Company, the Government having wisely decided the time had come to erect another and more suitable building on an uptown site in the residential district. When the present buildings were erected in 1870 the surroundings and conditions were very different from what they now are. The railway tracks were much farther to the south and fewer in number. The traffic has immensely increased. On the streets surrounding the building, the traffic was nil compared with the continuous movement of vehicles of all kinds, day and night. To the west, on King Street, there were no commercial houses of any kind on the south side. Opposite, on the north side, the entire block from Simcoe to John Street was occupied by the old Upper Canada College. This land is now entirely built over with mostly manufacturing establishments, and the whole neighborhood has become the centre of commerce.

On May 12th the Department called for competitive drawings, in the public press, for a new Government House and buildings in connection with same, conditions and requirements for the instruction of competing Architects having first been compiled by the Architect of the Department and approved by the Government, printed and supplied to architects applying for them, offering a prize of $1,000 for the best design and $500 for the second to the best. Twelve sets of competitive drawings were received, and the prizes awarded to Mr. King and Mr. George Gouinlock, whose designs stood 1st and 2nd in order of merit. As neither of these designs was considered by the Government to fully comprehend or embody the requirements of a building suitable for an establishment of this kind, the Architect of your Department was instructed to prepare plans of a building which would be up-to-date and fulfil all the requirements and be a credit to the Province.

Parliament Buildings.

The work of the reconstruction of the Westerly Intermediate and the West Wing which was partially destroyed by fire in September, 1909, was closed down on November 1st, on account of the difficulty of obtaining stone in sufficient quantities to carry on the operations profitably. Work was resumed on April 1st. In

the interim your Government decided to put an additional story on these portions of the building. Plans for the purpose were prepared by Mr. E. J. Lennox, Architect in charge, and contracts for stone and brick work and carpenter and joiner work were awarded in January, 1910, to the lowest tenderers, Messrs. Gearing & Curtis for the former and T. V. Gearing & Co. for the latter. Tenders were also advertised for other trades and the contracts awarded to the lowest tenderers in all cases as follows: Steel work, The Dominion Bridge Co.; heating and plumbing and ventilation, The Purdy, Mansell Co.; electric wiring, The Robt. Simpson Co.; plastering, Messrs. Hoidge & Son; marble work, The Hoidge Marble Works Co.; painting and glazing, A. E. Browne; iron staircases, The Dennis Iron and Wire Works Co.; marble treads to staircases, The Gibson Marble Works Co.; fireproofing, including terra cotta and concrete work, Messrs. Gearing & Curtis; tile flooring, H. M. Robinson & Co.; roofing, including copper and prism work, Douglas Bros., Ltd.; carving, Messrs. Holbrooke & Mollington.

Good progress has been made with the work, and everything possible is being done to have a large portion of the building sufficiently finished to admit of it being occupied before the opening of the next session of the Legislature. The work is being carried on under the supervision of the Architect, Mr. E. J. Lennox, and the Architect of the Department. The operations on this portion of the building have made such progress that it may be confidently expected that all will be fully completed by the end of the financial year.

To improve the ventilation of the central portion of the building, the easterly intermediate and the east wing, and to provide for the ventilation of the Library, or north addition, and to have a complete system which would be controllable from one place instead of three separate systems, on the recommendation of your Architect, it was decided to employ expert services to design a plan whereby this could be accomplished. The services of Messrs. Griggs & Holbrook, Heating and Ventilation Engineers, of New York, who have several extensive plants under contract in this city, were secured. Plans and specifications were prepared by them and approved of by your Government, and tenders called for, and the contract awarded to Messrs. Purdy, Mansell, Ltd., their tender being the lowest. This contract calls for a complete new system of supply and exhaust ventilation for the westerly intermediate and the west wing and the north addition, and repairing the present exhaust system in the centre building, the easterly intermediate and the east wing with new exhaust fans operated by electric motors, fresh air being also supplied to these portions of the building. The apparatus for a combined system for supply and exhaust for the westerly intermediate and the west wing and the north or library wing will be located in the basement adjoining the boiler room. The fresh air being taken from openings in wall on the north side, will be drawn through a tempering coil, and a water spray air washer, which will eliminate all dirt and foreign matter. From the washer, the air is taken under fan suction to a heater coil where it is heated sufficiently, and drawn by electrically operated fans through galvanized iron ducts to the various apartments.

Considerable repairs were made to the furniture damaged by fire and new furniture supplied as found to be necessary. Metal fittings have been supplied to the vaults in connection with the various Departments, and metal shelving of typical designs have been placed in the temporary Library in No. 4 Queen's Park, and will be removed to the new Library when it is completed.

Four of the vaults or rooms in the basement at the south-east angle of the east wing of the building have been fireproofed by increasing the thickness of the walls and constructing a steel and concrete ceiling over same, and placing fireproof

Present Government House,
South side.

vault doors to the entrances. Additional fireproofing was erected to the vault under the Surveys Branch in the basement at the south-east angle of the centre building, and a fireproof staircase erected to same from the office above, the work being done by men employed by this Department.

Repairs have been made to the buildings generally.

Early in the season, to permit of work in connection with the fireproofing of the building, the King's Printer Department was removed to the premises, No. 57 St. George Street, which has been leased to your Government until the portion of the building to be occupied by that Branch is completed. The house, which is adapted for the purposes for which it is being used, has been fitted up with shelving and office fixtures, the work being done by men employed by the Department. Repairs, as found to be necessary, have been made to this building. Repairs have also been made to the temporary library building, No. 4 Queen's Park.

The grounds and walks on the Government property surrounding the Parliament Buildings have been properly attended to by the Assistant Gardener, who has been acting Head Gardener during the past season, through the illness of Mr. Hewson, Head Gardener, which I regret has become so serious that he is not likely again to be in such condition as to permit of his attending to the duties which he has so long and faithfully performed.

The erection of the Library addition to the north of the main building is progressing satisfactorily. The boilers have been put in place and the Boiler House has been roofed in, and steam connections made to the Main Building. The contract, including all trades, for the erection of the building is being carried on by Messrs. Fred. Holmes & Son. The work is being carried on under the supervision of the Architect, Mr. George Gouinlock.

Osgoode Hall.

To give suitable accommodation for the Court of Appeal, the Judges and officials and the Master-in-Chambers Court, the Master-in-Chambers and the officials connected with that Branch, the old Appeal Court Room and the Masters Court being poorly lighted and ill ventilated, and the Judges' Rooms too small and not sufficient to accommodate additional Judges, to provide a suitable Library, to give much needed accommodation to the officials, their old offices being overcrowded, and to make provision for properly fireproofed vaults, your Government decided to remove that section of the building known as the North Wing, and erect in its place an addition which would give the necessary accommodation and improve conditions generally. Plans and specifications were prepared by this Department, tenders called for in the public press, and the contracts awarded to the lowest tenderers. For general trades, including excavations, concrete work, stone and brick work, cut stone work, tile flooring, carpenter work, slating and galvanized iron work, plastering and painting and glazing, S. F. Whitham of Brantford; for heating and plumbing, Messrs. Purdy, Mansell, Ltd., of Toronto; and for electric wiring, Messrs. Rice, Greene & Co., of Toronto. The foundations have been built, the boiler house enclosed, and steam connections made with the old portion of the building. This work was done in good time and connections made without in any way inconveniencing the occupants of the building.

The addition to the building will be three stories in height, exclusive of the basement, constructed of cement, stone and brick, and is designed to harmonize with the new west wing completed last year. The materials from the work that was taken down, when found to be suitable in the opinion of the Architect, have been used again in the new construction.

The old boiler house has been removed and a commodious fireproofed boiler room provided in the north end of the basement. Three of the boilers, which are in good condition and will last for some years to come, have been removed to this room, and a new boiler placed alongside of them, giving ample power to heat the buildings, and allowing a spare boiler for relieving when cleaning out. Provision has been made for the removal of ashes from furnaces by means of an hydraulic elevator. Commodious coal vaults have been provided adjoining the boiler room, extending outside of the building sufficiently to allow the coal to be dumped in overhead. Engineer's room, lavatory and store rooms are also located in the basement.

The space formerly occupied by the Masters Court on the ground and first floors is converted into a well-lighted corridor leading into the new building, with stone pilasters and dado on the sides, the whole being designed in keeping with the atrium of the main building. The floor will be of tile, designed to harmonize with the atrium floor. The new Court of the Master-in-Chambers is located on the the ground floor, with the Master's room adjoining, the Barristers' room being located on the opposite side of the hallway. On this floor there are six offices and two large fireproof vaults. The hallway continues from the new corridor, extending north to a hall running from east to west, with a private entrance and stairway for the Judges. The new Court of Appeal is located on the first floor immediately over the Master-in-Chambers Court, with a consulting room for the Judges adjoining. On this floor six Judges' chambers are provided for and a large Library facing north. The upper floor is divided into two rooms for Judges' chambers, offices for stenographers, a large lunch room, kitchen and pantries. Lavatories have been located on each floor and will be equipped with the latest sanitary appliances. An electrically operated passenger elevator is located at the south end to run from the ground to the upper floors. The building will be equipped and ready for occupancy by the first of September next.

Electric light wiring has been installed throughout the front centre building, under contract by Messrs. Rice, Greene & Co. The walls and woodwork of the corridors to the old west wing on the first and second floors, and some of the offices and Caretaker's apartments were painted. Repairs and painting were also done to the Caretaker's Cottage. Repairs to the buildings generally have been attended to.

Hospital for the Insane, Brockville.

The only new building for which plans and specifications were prepared by this Department is the Solar Room, which is being erected between the Main Building and Cottage "A" to the west of the main building, and corresponds to the Solar Room erected last year to the east of the main building. The building is completed, the work being mostly done by Asylum labour.

About the usual amount of repairs have been attended to, including the heating and plumbing apparatus.

The heating apparatus in Cottages "I" and "A" on each side of the main building has been changed from hot water to steam, supplied from the boilers in the main building. To give the necessary increased capacity and provide for further extensions, a new 125 H.P. Lyons Safety Boiler has been installed, and one of the old return tubular boilers changed to this type of boiler, thereby increasing its capacity from 80 to 150 H.P.

The water pipes leading from the tanks in water tower for fire protection were connected direct to the force pump to increase the pressure. Water mains to cottages were renewed and increased.

Osgoode Hall addition to rear of Main Building.
Under construction.

The barns have been wired for electric light

This work was done under the supervision of the Inspector of Boilers of the Public Works Department.

Hospital for the Insane, Cobourg.

Necessary repairs have been made to the buildings, and a root house erected on the grounds by Messrs. Henderson Bros., of Cobourg, contractors, whose tender was the lowest.

Hospital for the Insane, Hamilton.

All repairs and alterations were made to the buildings in connection with this Institution under the supervision of the Medical Superintendent, with the exception of some machinery installed in the Laundry and Machine Shop, this work being done under the supervision of the Boiler Inspector of this Department.

Hospital for the Insane, Kingston.

Plans and specifications were prepared for an addition to the Medical Superintendent's residence and for an addition to the kitchen of the main building. The work has been satisfactorily done by the Mechanical Staff of the Institution and patient labour. Plans and specifications were also made for an addition to the greenhouse. The work has been satisfactorily completed by the staff and patients, all under the supervision of the Medical Superintendent. Repairs and other work in connection with the buildings of this Institution have been carried on under the supervision of the Medical Superintendent.

Hospital for the Insane, London.

The skating rink, for which plans and specifications were prepared by this Department and foundations built last year, has been completed. The building is 70 feet x 180 feet of clear span, giving ample space for skating and curling. Comfortable dressing rooms, with lavatories, lockers, etc., have been provided. The work was done by Asylum labour under the supervision of the Medical Superintendent and the Carpenter of the Institution, and is satisfactory in every particular.

Plans have been prepared for large balconies to be erected at the end of the North Building, but owing to the large amount of work being done by the Asylum staff the building has been deferred until next year.

Plans have been prepared for the installation of electric wiring and Hydro-Electric power for supplying current for light and power, and arrangements are being made to commence work at an early day.

Hospital for Idiots, Orillia.

The children's shelter or play shed, plans of which were made last year, has been erected, the work being done by Asylum labour under the supervision of the Medical Superintendent. Repairs to buildings generally have been attended to. Engine lathe, drill press and power pipe machine, and electric motor have been installed in the machine shop under the supervision of the Inspector of Boilers. Repairs and alterations have been attended to under the supervision of the Medical Superintendent.

Hospital for the Insane, Penetanguishene.

Revised plans were made for the cold storage building adjoining the kitchen of the main building. Work was commenced early in the season under the supervision of the Medical Superintendent, and is being done by day labour, with the assistance of the patients.

The boiler house in connection with the power plant has been completed, and a new 100 H.P. tubular steam boiler installed under the supervision of the Inspector of Boilers. Repairs to buildings have been attended to.

Mercer Reformatory for Females, Toronto.

Plans and specifications were prepared for an addition to the boiler house. The building has been erected, the work being done mostly by prison labour. The old boilers have been removed to the new locations and a 100 H.P. tubular steam boiler installed, under contract by the Polson Iron Works.

Repairs to the buildings have been made as required.

Normal and Model Schools, Toronto.

The addition to boiler house commenced last year was completed early in the season, including the installation of the boilers and changes in the steam mains.

Plans and specifications were prepared for reconstructing the ladies' and girls' lavatories in the Normal School. Tenders were called for and the contract awarded to the lowest tenderers, Messrs. Fiddes & Hogarth. The old style of apparatus was removed and new, up-to-date sanitary appliances installed, the enclosures being of Italian marble and the floors of tile.

Repairs to the Education Department Building and the Normal and Model School buildings received proper attention, including the re-laying of floors to some of the class rooms and corridors, and painting halls and class rooms. New radiators to improve the heating were placed in some of the apartments in the Normal School.

Normal and Model Schools, Ottawa.

A neat iron fence has been erected on the north, east and west sides. An amount will be asked for in the Supplementary Estimates to continue this fence. The work was done by contract by Jos. Smith, of Ottawa. A contract has been awarded for an ash hoist to the boiler house, which is now being placed in position by the Pendrith Machinery Co., of Toronto, to be operated by an electric motor.

The buildings have been kept in good repair.

Normal and Model Schools, Hamilton, Stratford, Peterboro and North Bay.

Some slight repairs were made to the buildings, and furniture supplied where necessary. A contract was awarded for ash hoists for each of these buildings to the Pendrith Machinery Co., of Toronto, which are now being installed. All will be operated by electric motors.

The grading, seeding and sodding of the grounds to the Normal School in North Bay has been completed, the work being done under the supervision of the Principal of the School.

Additional grading and sodding were also done on the grounds of the Normal School in Stratford and a tennis court constructed, the work being done under the supervision of the Principal of the School.

Institution for the Deaf and Dumb, Belleville.

Tenders were called for, for reconstructing and improving the cow stables and barn, and the contract awarded to Messrs. Zufelt & Button, of Trenton, their tender being the lowest. The work is completed with the exception of a few minor details.

A contract was awarded to Chas. Vanderwater, of Belleville, for the reconstruction of the present silo and the erection of a new silo built of concrete. This work is also about completed. Repairs and improvements have also been made to the buildings, drains, etc.

Institution for the Blind, Brantford.

Tenders were called for and the contract awarded to P. H. Secord & Sons, for a new cement walk to replace one of the old wood sidewalks. The work was satisfactorily completed under the superintendence of a competent Inspector from this Department.

To economize in the consumption of coal, the heating of the workshop has been changed to a Vacuum System at a moderate outlay.

Alterations were made in the Engineer's house, and a hot water system installed, the heating work being done under contract by A. Taylor.

Ontario Agricultural College, Guelph.

Plans have been prepared for an addition to the engine room, to provide for the installation of apparatus to be used in connection with the Hydro-Electric power to be applied to this Institution.

A new hot water heating boiler has been placed in the greenhouse to replace an old boiler.

Winter Fair Building, Guelph.

This building was sufficiently completed to be occupied in time for the opening of the Fair on December 8th. It has since been fully completed, and the balance of the amount granted by the Government towards the cost of the building handed over by the Government to the City Council of Guelph, the building having been erected by them in accordance with their agreement with the Government.

Ontario Immigration Offices.

The portion of the building, No. 152 Front Street West, leased by the Government, has been fitted up for offices, the work being done by the Carpenter and staff of this Department. New plumbing apparatus has been installed by the Departmental Plumber. Furnishings were supplied as required.

Eastern Dairy School, Kingston.

Plans and specifications were prepared for an addition to this building for cold storage apparatus, tenders called for, and the contract awarded to Wm.

McCartney, of Kingston. The work has been completed. A cold storage plant has been installed by the Eureka Refrigerator Co., of Toronto. Some slight alterations were made to the interior of the building and repairs made when necessary.

Districts.

Nipissing.—The addition to the Court House at North Bay, for Judges' Chambers, has been completed, furnished and occupied. Some slight alterations have also been made to the Court House. Repairs have been made to the Court House, Gaol and Registry Office. Repairs have been made to the Lock-ups throughout the District. Lock-ups have been built at Matheson and Porcupine.

Parry Sound.—Repairs have been made to the Court House, Gaol and Registry Office at Parry Sound and to the Gaol at Burk's Falls, and furniture supplied as necessary.

Manitoulin.—Repairs have been made to the Court House and Gaol at Gore Bay and to the Registry Office at that place. Repairs have been made to the Lock-up at Manitoulin.

Sudbury.—Some slight repairs were made to the Gaol, and baths installed for the prisoners. The grading of the grounds of Court House was completed, the work being done by the prisoners. Hand fire extinguishers for fire protection have been supplied to the Court House, Gaol, and Registry Office and placed in position ready for use.

Sault Ste. Marie.—The Court House, Gaol and Registry Office have been kept in good repair, and furniture supplied and renewed as required.

Rainy River.—The Gaol and Gaoler's residence and the Registry Office have been properly attended to, repairs made and furnishings supplied when necessary. Furniture has been supplied to the temporary Court Room and offices of the officials of the District.

Thunder Bay.—Repairs have been made and furniture supplied to the Court House, Gaol and Registry Office at Port Arthur. The old Registry Office has been renovated, painted and papered, and is now being used by the Sheriff. Repairs have been made to the Lock-ups in the District.

Kenora.—Tenders were called for in the press for the completion of the new Court House at Kenora, the foundations of which were erected last year. The contract was awarded to the lowest tenderers, M. A. Pigott & Son, of Hamilton. Good progress has been made with the work of the building, which will be completed and fully equipped and furnished and ready for occupation in time for the Spring Assizes. Some minor repairs were made to the old Court House and Gaol.

Boiler Inspection.

The boilers and machinery in the Provincial Buildings throughout the Province have been carefully inspected and reported on by the Inspector of Boilers at least twice in the year. Boilers requiring to be repaired have been attended to and boilers worn out have been replaced with new boilers. Machinery has also been repaired and renewed and new machines supplied where necessary.

Fire Inspection.

During the past year an Inspector of Fire Appliances was appointed. Most of the Institutions have been visited by him and conditions as regards water supply, fire escapes and fire fighting appliances reported on. New fire hose, chemical fire extinguishers and other apparatus were supplied where found to be necessary.

New Court House, Kenora.
Nearing completion.

GENERALLY.

Considerable additional work was added to the Department through the erection of the additions to the Parliament Buildings and the reconstruction of the west wing, all accounts in connection with the works being checked by the Department and certificates vouched for by your officials.

Considerable work is done in this Department in connection with the Provincial Secretary's Department, and while that Department has practically taken over the general repairs to the Provincial Institutions, and has erected a number of new buildings, the labour of the patients being used as much as possible, this Department makes or passes on the plans for new buildings and alterations to the present buildings and inspects them from time to time as may be necessary. The Inspector of Asylums consults your Architect in reference to them and approves of the plans.

Plans for the Registry Offices at Hamilton, Walkerton, Ottawa, and Stratford were submitted to your Architect and reported on and approved by him, after certain recommendations made in these reports were complied with.

All of which is respectfully submitted.

F. R. HEAKES,

Architect.

REPORT OF THE ENGINEER.

Department of Public Works, Ontario, Nov. 1st, 1910.

Hon. J. O. Reaume,

Minister of Public Works, Ontario.

Sir,—I have the honour to report on the Public Works under the control of the Engineer's Branch of the Public Works Department for the year ending October 31st, 1910.

The ending of the fiscal year on October 31st found this Department with a number of bridges projected for the year 1910 in an uncompleted condition. As this condition of affairs was anticipated, an appropriation of $15,000.00 was made to carry on works under construction. The work is being energetically prosecuted and it is confidently expected that the greater number of the bridges will be opened for traffic before the winter sets in.

Practically all the work done under this Department during the year 1910 was done by day labour under competent foremen. Plans and specifications for the different works are prepared in the Engineer's office. The material is all purchased by the Department. Where considerable quantities are used of cement, reinforcing steel, timber, etc., tenders are called for, and the contract invariably let to the lowest tender.

For the steel superstructure for the bridges, tenders were asked for from all the Bridge Companies operating in Ontario. The season's work was divided between the following companies:

The Dickson Bridge Works Company, of Campbellford.

The Hamilton Bridge Works Company, of Hamilton.

The Western Bridge and Equipment Company, of Chatham.

The Jenks-Dresser Company, of Sarnia.

During the season of 1910, twelve new steel bridges on concrete abutments were constructed; one flat-top concrete bridge of 30 feet clear span was completed; two overhead bridges of steel and concrete were erected, and a number of wooden bridges, varying in length from 10 to 400 feet were built under special appropriations.

The steel bridges on concrete abutments are located as follows:

Over the Magnetawan River in Perry Township, over the Burnt River at Gooderham, over the Black Creek in Dalton Township, over the Hoc-Roc River in Muskoka Township, over a creek in Stephenson Township, over the Rosseau River in Cardwell, over the Amable Du Fond River at Eau Claire, over the Wissi-Wassa River at Wissi-Wassa, over the South River at Nipissing Village, over Birch Creek near Webbwood, over Hoeffler Creek near Massey, over the Thessalon River at Rydal Bank. The flat-top concrete span is over the Root River near Sault Ste Marie. The steel and concrete overhead bridges are over the Soo Branch of the Canadian Pacific Railway, in the townships of Hallam and Baldwin, on the Sudbury-Soo Trunk Road.

The principal wooden bridges are:

The Black River bridge at Matheson.

The Neuve River bridge, near Markstay.

The Filiatrault bridge, near St. Charles.

The Winnipeg River bridge, at Keewatin.

A number of bridges uncompleted on the 31st of October, 1909, have been completed during the past season, and opened to traffic. Several drainage schemes for which special appropriations were voted under the provisions of the Provincial Drainage Aid Act, were examined and reported on during the year.

Considerable drainage work in Rainy River was done under the supervision of this Department. Other drainage works of minor importance were: The improvement of Sucker Creek in Rama Township, the improvement of Bonfield Creek in Bonfield Township, the Springer drain in Springer Township, and the opening up of a creek in Macpherson Township. Work was continued during the year at Ferguson's Falls, on the Mississippi River, and also at the removal of the big jam in the Saugeen River, near Durham. A concrete core dam was constructed at the break in the Nottawasaga River, in Sunnidale Township.

The work of maintenance and repair of the Locks, Dams, Wharves and Bridges under the control of the Department of Public Works has necessitated a heavy expenditure during the year. A new hull for the dredge was constructed at a cost of $3,024. Another unusual expenditure was incurred in rebuilding the bridge at Pearson's Landing, on the White River, which was carried away by a log jam. This season during the log drive watchmen were stationed at the different bridges on the White River, and trouble was avoided.

The dredge was operated in the Muskoka Lakes all summer. During the winter the dredging machinery will be installed in a hull at Huntsville and during 1911 the dredge will be operated in the Mary and Fairy's Lakes waters. Small repairs were made at the Huntsville Locks and Port Sydney Dam. Extensive repairs were carried out at the Port Carling Lock. On the Magnetawan waters minor repairs were made at the locks and the Ahmic Lake Dam. The expenditure during the year on maintenance and repair amounted to $29,867.13.

Immediately on the close of navigation the old timber structure, the Magnetawan Lock, is to be replaced in concrete. The old lock is in a very dangerous condition; its further use would be a menace to public safety. Material will be supplied before the close of navigation, and it is expected that the new concrete locks will be ready for operation before the opening of navigation in 1911. The work is to be done by day labor. Wm. Kennedy, Superintendent of Public Works, will be in charge of the work. S. W. Butt, Foreman of Public Works, will carry on the work of construction.

Bridges, Muskoka District.

A steel and concrete bridge was built across the Rosseau River, in the Township of Cardwell, about six miles from Rosseau. The old wooden bridge at this point was worn out and in a very unsafe condition. The new bridge has two spans of 24 and 22 feet. The superstructure is a concrete floor supported by 12-inch steel beams; guard railings of 1¼ inch pipe are supplied. The abutments and centre pier are of native rock, laid in cement mortar. The steel beams, floor mesh and pipe railings were supplied by the Western Bridge & Equipment Company of Chatham, at a cost of $446.80. The abutments were constructed, the floor laid, and the grading done by Wm. Lowe, Inspector Colonization Roads, at a cost of $513.76.

The Stephenson Township Bridge, located on the Muskoka Road, midway between Huntsville and Utterson. The bridge has one span of 24 ft. A concrete floor is supported on 12-inch steel beams; guard railings of 1¼ inch are supplied. The abutments are of native rock, laid in cement mortar. The steel beams, floor

mesh and pipe railing were supplied by the Western Bridge and Equipment Company of Chatham, at a cost of $184.76. The construction was carried out by Wm. Lowe, Inspector Colonization Roads, at a cost of $193.75.

Little Chute Bridge, Baxter Township.—This bridge is built across the Little Chute, about 1¼ miles from Port Severn. The bridge is built of timber, on abutments of native rock set in cement mortar. The bridge is 60 ft. long, and has a centre pier. The approaches are graded, 60 ft. at the south end, and 80 ft. at the north end, and raised 2 ft. higher than the former level of the bridge. The work was done under the supervision of Wm. Lowe, at a cost of $400.29.

Hoc-Roc Bridge, in Muskoka Township.—This bridge is on the Doe Lake Road, about five miles from Gravenhurst, and crosses the Hoc-Roc River. The span is 24 ft. clear. The floor is concrete, supported by 12-inch steel beams. The abutments are of native rock, set in cement mortar. The steel beams, floor mesh and pipe railing were supplied by the Western Bridge & Equipment Company of Chatham, at a cost of $184.76. The construction was done under the supervision of Wm. Lowe, Inspector of Colonization Roads, at a cost of $204.50.

Sharp's Creek Bridge, Township of Stisted.—This bridge is a steel superstructure on stone abutments. The abutments were built by the township, but were found to be too low, and very poorly constructed. The abutments were practically reconstructed and raised about two feet. The approaches were graded, and the bridge placed in a substantial and serviceable condition. The work was done under the supervision of Wm. Lowe, at a cost of $598.17.

Bridges, Parry Sound District.

Magnetawan River Bridge, Perry Township.—This bridge is over the Magnetawan River, in the township of Perry, about three miles east of Emsdale. It is a single steel span, 50 ft. long, with a concrete approach span 26 ft. long at each end. The floor is concrete, 102 ft. long over all. The bridge trusses rest on concrete pedestals 3 ft. square; the steel joists are supported by a curtain wall between the pedestals; the shore ends of the concrete beams rest on small abutments. There are no wing walls used, and the earth is allowed to fall to a natural slope. This form of construction was found to be more economical than using heavy abutments and wing walls. The concrete approach consists of four reinforced concrete beams 24 inches in depth. The two centre beams are 16 inches wide, and the outside beams 14 inches wide. The beams are reinforced with one-inch twisted steel bars, and the 6-inch concrete floor is reinforced with No. 6 expanded metal mesh. Owing to the late erection of the steel work, the concrete floor was not laid on the steel span. The balance of the work is completed. The steel span was supplied by the Western Bridge and Equipment Company of Chatham for $750. The reinforcing cost $118.63, and the substructure, concrete approaches, grading, etc., cost $1,598.63. The work was carried out under the supervision of J. W. Hackner, Civil Engineer. Considering the nature of the structure and the amount of labor involved, the cost of this bridge is remarkably low.

Wissi-Wassa River Bridge.—This bridge is of steel and concrete, and is built over the Wissi-Wassa River in the Township of Himsworth, near Lake Nipissing. The bridge has a single span of steel 45 feet long, and a concrete approach span 24 feet long. The bridge has a clear width of 14 feet and a reinforced concrete floor throughout. The concrete approach consists of a 6 inch floor supported on four reinforced beams, 24 inches deep. The steel span was supplied and erected by the

Rosseau River Bridge, Township of Cardwell.

Bridge over Wissi-Wassa River, Himsworth Township.

Western Bridge and Equipment Company of Chatham, for $580.00. The concrete beams are reinforced with ¾ inch twisted steel bars, and the floor is reinforced with No. 6 expanded metal floor mesh. The bridge was constructed under the supervision of S. W. Butt, Foreman of Public Works. The cost, apart from the steel and reinforcement, was $1,183.00. The bridge is open to traffic.

South River Bridge, Nipissing Township.—This bridge is built over the South River at the Village of Nipissing, near Lake Nipissing. It is of steel and concrete. It comprises one steel span 80 feet long, with two reinforced concrete approach spans 30 feet long, making the entire length 140 feet. The steel span is supported on concrete pedestals, which rest on a concrete base. On the south-west side the concrete base is supported on a pile foundation. The floor joists are supported by an 18 inch curtain wall between the pedestals. The shore ends of the concrete approaches are supported on light concrete abutments, with wing walls. The steel span was supplied and erected by the Hamilton Bridge Works Company for $1,677.00. Twisted steel bars were used for reinforcement in the concrete beams in the approaches and No. 6 expanded metal floor mesh was used in the floor reinforcement. The pile foundations were prepared under the supervision of D. H. McIntosh, Foreman Public Works, and James Leitch, C.E. The concrete work in the piers and approaches, and the laying of the concrete floor, were done under the supervision of S. W. Butt, Foreman of Public Works. The cost of the bridge complete was $5,498.00. This bridge is one of the finest looking structures in the country. The location is difficult of access in supplying material. The pile foundations were expensive. When these drawbacks are considered it will readily be seen that this bridge was built at a very low figure.

Nipissing District Bridges.

Eau Claire Bridge, at Eau Claire.—This bridge is built over the second channel of the Amable Du Fond River, at the Village of Eau Claire. It is a 60 ft. steel span, with 14 foot roadway, on a concrete abutment at the south end, and having concrete pedestals and a concrete approach span, 26 feet long on the north end. The abutment and pedestals are on rock foundations. The concrete approach is of the same construction outlined in the description of the Magnetawan River Bridge. The steel span was supplied and erected by the Western Bridge and Equipment Company, of Chatham, at a cost of $900.00. The steel reinforcement used was the Kahn bar, at a cost of $154.46. The labor and material for the abutment, concrete beams, and laying the concrete floor, amounted to $1,891.98. The work was carried out under the supervision of S. W. Butt, Foreman of Public Works. The bridge is completed and opened for traffic.

Madawaska River Bridge, Airy Township.—The steel on this bridge was erected in 1909. This year the floor was laid and the approaches completed at a cost of $1,000.00.

Victoria County Bridges.

Black Creek Bridge in Dalton Township.—This is a steel and concrete bridge erected over the Black Creek, in the Township of Dalton. This bridge is locally known as "Kehoe's Bridge." It comprises a steel span 60 feet long and two concrete approach spans of 26 feet each. The steel is supported on concrete pedestals, which rest on concrete bases 6 feet wide. As the bottom is very soft, pile foundations were necessary for the bases. Forty foot piles would not reach solid footing, and it was found necessary to splice the piles. This rendered the preparation of

the foundations a slow and expensive work. The bridge will not be completed until the spring. The steel span was supplied by the Hamilton Bridge Works Company for a contract price of $1,032.00. The concrete work and pile foundations were done under the supervision of C. R. Dolmage, Foreman of Public Works.

Haliburton County Bridges.

Burnt River Bridge, Buckhorn Road.—This bridge is constructed over the Burnt River at the Village of Gooderham. It consists of a 45 foot steel span on concrete abutments. The concrete abutments are supported on pile foundations. The steel span was supplied and erected by the Western Bridge & Equipment Company of Chatham. The abutments were constructed, the approaches graded and the floor laid under the supervision of Amos Train, Foreman of Public Works. The bridge has been opened to traffic. $2,770.00 has been expended on the work, and there is a small balance unpaid on the steel contract.

Renfrew District Bridges.

Mattawatchan Bridge.—This bridge, over the Madawaska River, in the township of Mattawatchan, was started in 1909. It has two steel spans of 100 ft. each. The abutments and centre pier are of concrete. The concrete work was completed in 1909, but the steel superstructure was not erected until the spring of 1910. The floor system, which is of timber, was purchased by the Department, and put in place by the Bridge Company under the terms of their contract. The grading on the approaches was completed and the bridge opened to traffic. The bridge fills a long felt want. Heretofore it was a four days' journey for the settlers to visit and return from Renfrew. Now, with the river bridged and a new road opened, these settlers are able to make a journey to and from Calabogie in one day. The expenditure on the bridge in 1910 was $3,474.89.

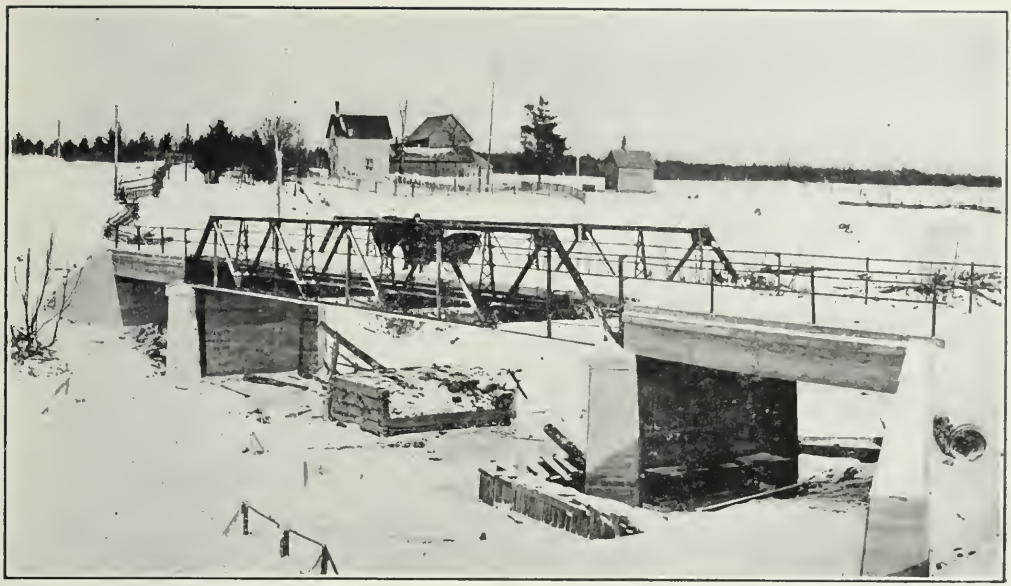
Temiskaming Bridges.

Black River Bridge.—This bridge is built across the Black River at the Town of Matheson. It is the first bridge constructed by the Public Works Department beyond the height of land. It affords access from the Munro Township mining section to the T. & N. O. Ry. It will also prove a boon to a large section of splendid agricultural land lying east of the Black River. The bridge is built of timber. It comprises a central truss span 60 ft. long, supported on double pile piers. The balance of the structure consists of a pile trestle 204 ft. long, with pile bents 17 ft. centre to centre. The entire length is 278 ft. The roadway is 14 ft. in clear width. Building material was supplied by the Department, and the work was carried out under the supervision of Colin McDonald, Foreman of Public Works. The bridge was opened to traffic in the latter part of October. The entire cost of the bridge is $3,920.00.

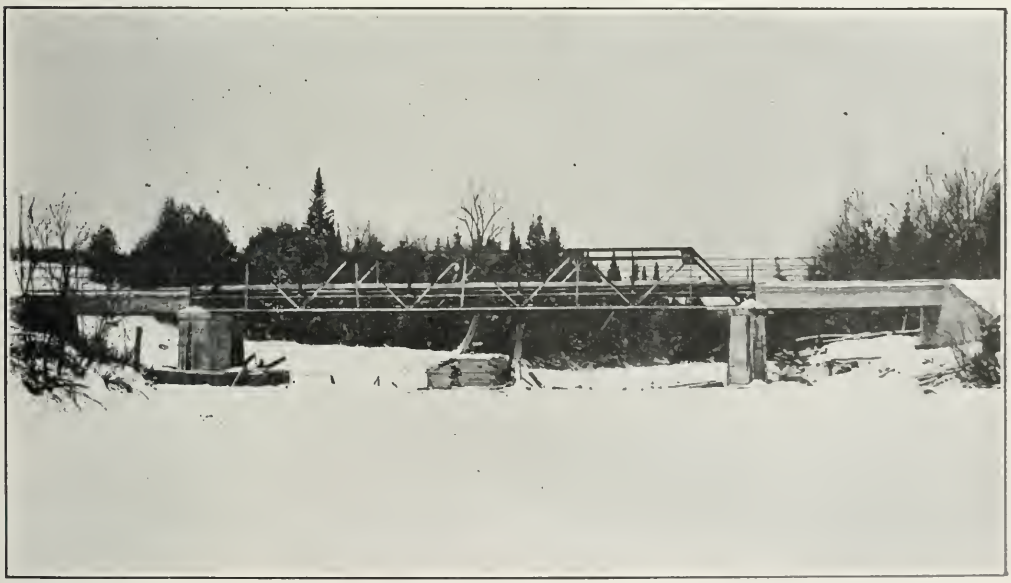
Dixon Creek Bridge.—The stone arch culvert over Dixon Creek, in the township of Bucke, was completed and opened to traffic in November, 1909. The expenditure incurred on the work this year amounted to $320.62.

Sturgeon Falls District Bridges.

Filiatrault Bridge.—This is a wooden bridge, 425 ft. long, over Filiatrault Lake, near St. Charles, on the townline of Jennings and Casimir townships. The



South River Bridge at Nipissing Village.



South River Bridge at Nipissing Village.

Eau Claire Bridge, over Amabel-du-Fond River.

Eau Claire Bridge, over Amabel-du-Fond River.

sum of $700.00 was appropriated to complete a bridge partly constructed at this point. It is a pile bridge with bents set 16 ft. centre to centre. The work was done under the supervision of A. L. McDonald, Inspector Colonization Roads for the District.

Faulkner Bridge.—This is a timber bridge built over an arm of Lake Nipissing at Monetteville. The bridge is 100 ft. long, and is covered with cedar on cedar stringers. The work was done under the supervision of A. L. McDonald, at a cost of $500.00.

Sudbury District Bridges.

Veuve River Bridge.—This is a timber bridge over the north branch of the Veuve River, near Markstay. It is 86 ft. long, and has a clear width of 14 ft. The central truss span is 40 ft. long, supported at each end by double pile bents set six feet apart. At each end are trestle spans 17 ft. long, supported by pile bents. The timber in this bridge is exceptionally good, and the workmanship is of a high class. It is one of the most substantial timber bridges in New Ontario. The bridge was built under the supervision of John McPhee, for $997.95.

Vermillion River Bridge.—This bridge, on the crossing of the Trunk Road over the Vermillion River, was constructed in 1909, but the approaches were not completed and the contracts were not closed. The work was continued during November and resumed in the Spring and carried to completion. The balance of the contracts, $905.00, was paid, and $3,627.00 was expended on the approaches and grading.

Manitoulin District Bridges.

Spanish River Bridge, Nairn Township.—This bridge was started in the Spring of 1909, but was not completed at the close of the financial year. The work was continued during November and December, and the bridge was opened to traffic in January, 1910. $3,064.75 was paid on this work during the past season.

Baldwin Overhead Bridge.—This is an overhead crossing constructed over the Soo Branch of the Canadian Pacific Railway at the crossing of the Sudbury-Soo Trunk highway. The Railway Board of Canada refused permission for a grade crossing. This necessitated an overhead bridge, and it was deemed advisable to erect a permanent structure of steel and concrete. The bridge is a steel trestle of four spans; the main span above the tracks is 33 ft. 6 in. long. Two spans are 20 ft. each and one span is 26 ft. long, making a total length of 99 ft. 6 in. The supports are "H" Sections, resting on concrete bases. The floor system of the central span consists of two outside lines of 24 in. beams, with a central 15 in. floor beam, which supports five lines of 9 in. steel joist. For the shorter spans, the floor system consists of seven lines of 12 in. joist supported by steel bents. A lattice guard rail is provided. The floor is not yet laid, but it is to be of reinforced concrete. It is proposed to completely encase the steel joist in concrete to protect the steel from the corrosive action of the gases from the locomotives. The grading up of the approaches is an expensive part of this work, and is not fully completed. The bridge is all ready for the concrete floor, which will be laid as soon as the weather will permit in the Spring. The steel was supplied and erected by the Jenks-Dresser Bridge Works Company of Sarnia, at a cost of $1,809.00. The concrete work was done under the supervision of S. W. Butt, Foreman of Public Works.

Algoma District Bridges.

Birch Creek Bridge.—This bridge is properly a steel trestle. It is built over Birch Creek, about half a mile west of Webbwood, on the Sudbury-Soo Trunk Road. There is a deep and wide ravine to be crossed, and to make the grades practicable it was necessary to raise the floor of the bridge to an unusual height. It was found that the steel trestle supported on concrete bases was the most economical structure for the location. The bridge consists of a central span of 60 ft. covered with an inverted warren truss, 4 spans of 24 ft. and one span of 18 ft., making a full length of 174 ft. The roadway has a clear width of 14 ft. The floor is of reinforced concrete. A lattice guard rail is provided for each side. The bottom was found to be very insecure, and pile foundations had to be provided for the concrete bases. The steel contract was let to the Dickson Bridge Works Company of Campbellford, for $3,558.74. The pile foundations were prepared by D. H. McIntosh, Foreman of Public Works, and the concrete work and grading were done under the supervision of S. W. Butt, Foreman of Public Works. Owing to the late erection of the steel work it was deemed advisable to postpone the laying of the concrete floor until Spring. The bridge will be open to traffic as soon as the frost leaves the ground sufficiently to admit of the proper completion of the approaches. $5,845.00 has been expended on the work up to October 31st.

Hoeffler Bridge.—This bridge is over a small stream—Hoeffler Creek—about three miles east of Massey, on the Sudbury-Soo Trunk Road. Although the stream is small, the ravine is deep and wide, necessitating a long and high bridge. The steel trestle was adopted. It consists of three spans of 30 ft. each. The supporting bents are of 8 inch "H" posts, resting on concrete bases. There are no abutments or wing walls. The end posts are encased in concrete, and the fill is allowed to fall to a natural slope. The toe of the slope of the fill is protected by rip-rap. The steel structure was supplied and erected by the Jenks-Dresser Bridge Company of Sarnia for $1,531.00. The concrete work and grading were done under the supervision of J. W. Hackner, Civil Engineer. The concrete floor will not be laid until Spring. The bridge will be opened to traffic early in the season.

Rydal Bank Bridge.—This bridge is over the Thessalon River at Rydal Bank. It was the largest of the works undertaken during the past season. It consists of a steel span 120 ft. long, and a concrete trestle approach at each end 30 ft. long, making the overall length 210 ft. The steel span is supported on concrete columns which rest on a concrete base constructed in 8 ft. of water. The bottom is soft and treacherous, and a pile foundation had to be provided for the piers. An 18 in. curtain wall is constructed between the concrete columns to carry the steel floor joist and the concrete beams of the approach. The approaches have a 6 in. concrete floor, supported by concrete beams, which rest on the piers and light shore abutments. The two middle beams are 16 in. wide and 24 in. deep. The beams are reinforced with Kahn bars, supplied by the Trussed Concrete Steel Company of Walkerville, at a cost of $268.00. The concrete floor of the bridge is reinforced with expanded metal. The steel span was supplied and erected by the Dickson Bridge Works Company of Campbellford, at a cost of $3,010.00. The pile foundations were prepared and the concrete work, the laying of the floor, and the grading done under the supervision of J. O. Coates, Foreman Public Works. The full cost of the bridge will amount to $10,000. This bridge is pronounced by many parties who have examined it, to be the finest looking combination of steel and concrete to be found in the country.

Bridge over North Branch, Veuve River, near Markstay.

Spanish River Bridge, Nairn Township.

Overhead Crossing, C. P. R. Sudbury-Soo Trunk Wagon Road, near Webbwood.

Sudbury-Soo Trunk Wagon Road over Birch Creek, near Webbwood.

Tunnel Bridge, Mississauga River, Wells Township.

Tunnel Bridge, Mississauga River, Wells Township.

Thessalon River Bridge, at Rydal Bank.

Root River Bridge, Tarentorus Township.

Hallam Overhead Bridge.—This bridge is an overhead crossing on the Sudbury-Soo Trunk Road, over the Soo Branch of the Canadian Pacific Railway, about one and one-half miles west of Webbwood, in the Township of Hallam. It is a steel trestle 100 feet long. It has a central span 33 ft. 6 in. long, provision being made for a second track on the line of railway. It has two spans of 20 ft. each, and one span of 26 ft. The roadway has a clear width of 14 ft. Lattice guard railings are provided on each side. As the line of railway passes here through a deep cut, the filling of the approaches at each end was light work. The flooring, which is not yet laid, is to be of concrete 6 in. thick, reinforced with No. 6 floor mesh. The steel was supplied and erected by the Jenks Dresser Company of Sarnia at a contract price of $1,765.00. The concrete bases for steel bents and the grading were done under the supervision of S. W. Butt, Foreman of Public Works. The crossing will be open to traffic early in the Spring of 1911.

Tunnell Bridge, Wells Township.—The Tunnell bridge is erected over the Mississauga River in Wells township. It consists of a steel arch of 93 ft. clear span, with steel trestle approach spans 20 ft. long in the west, and 40 ft. long in the east end, giving an over all length of 153 ft. The steel arch footings are on solid rock, and the steel posts of the trestle are on concrete bases. The floor is of timber, and the material was supplied by the Department at a cost of $235.40 The steel was supplied and erected, and the concrete work and the necessary grading done by the Dickson Bridge Works Company of Campbellford, at a contract price of $4,892.00. The entire cost of the bridge was $5,236.35.

St. Joseph Township Bridge.—An old timber bridge 100 ft. long, on the line between Concessions F and G was replaced with a short span 12 ft. long. Concrete abutments 23 ft. high were built. This necessitated a heavy fill at each end. The sides of the fill are protected by a railing. The stone walls were built in 1909, but the filling was not done. This year the filling of the approaches was completed at a cost of $500.00. The work was done under the supervision of Samuel Cole, Inspector Colonization Roads in the District of Algoma.

Laird Bridges.—A special appropriation of $800.00 was made for building and repairing bridges in the Township of Laird. No. 1 is a bridge across Bar River, on the line between Sections 4 and 5. The bridge is 77 ft. long, the old bridge being shortened up 34 ft. It has a central span 20 ft. long, with a king truss, 4 spans of 14 ft. each. Pile bents are used, and the wing walls are piled. The pile bents are capped with 12 x 12 timbers. Six line of 4 x 12 stringers are used. The covering is 3 in. tamarac plank, 14 ft. long. A guard rail is provided on each side. The approaches are filled with stone and covered with gravel.

(2) The bridge known as "McCradie's bridge" over Bar River, on the line between Sections 5 and 6, was recovered. The bridge is 68 ft. long. It has a central span 20 ft. long, which was provided with a new king truss. New stringers 3 x 12, and a new covering were provided. A substantial railing was put on, and approaches leveled up and graveled.

(3) Garrett's Bridge, over Bar River, on the line between Sections 7 and E, was recovered with 3 in. tamarac plank. The length of the bridge was shortened from 106 to 93 ft., and the approaches properly filled.

(4) A small bridge, 19 ft. long, on the line between Sections 3 and 10 was recovered. Six lines of stringers were provided, and a cover of 3 in. tamarac plank, 14 ft. long, put on.

Two small bridges were done away with by making a cut 4 rods in length, the bed of the creek was changed, and material was provided for filling up the old bridge cuts.

The labor on these five works cost in all $443.75, and the material was supplied for $355.00. The work was done under the supervision of S. Cole, Inspector Colonization Roads.

Salter and Victoria Bridges.—This bridge is on the line between Section 25 of Victoria and Section 30 of Salter. It is 44 ft. 6 in. long, has pile bents and three spans of 15 ft. each. The caps and stringers are flatted cedar. The covering is 3 in. hemlock. A substantial guard rail is provided. The approaches, 100 ft. long, are raised above high water level, and the upper face of the fill rip-rapped to protect it against the action of the water.

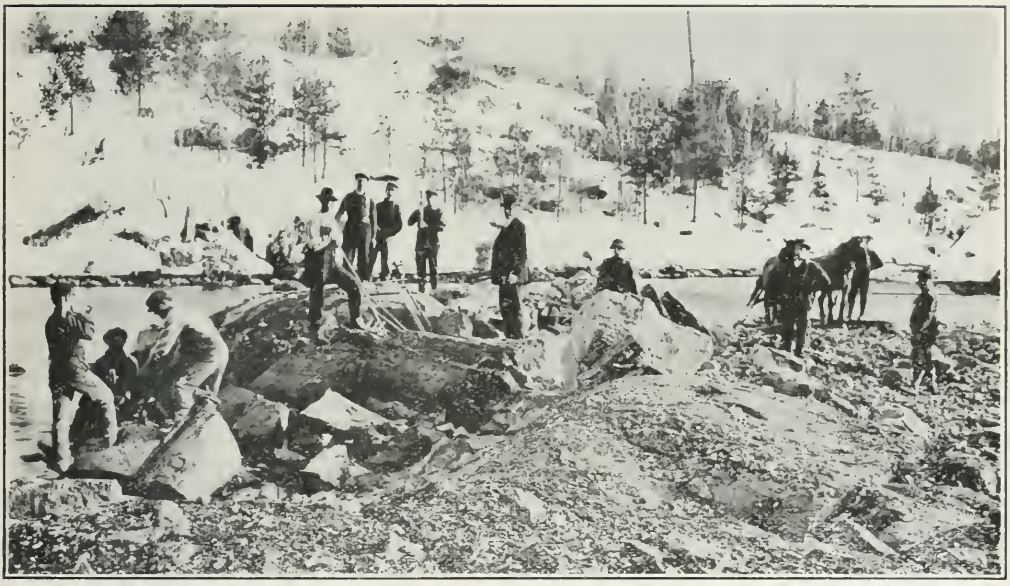
The Salter Bridge on Section 38, is known as the "Company Bridge." and is on the road between Walford and Spanish River. It is 42 ft. long, and has three spans of 14 ft. each. Pile bents capped with flatted cedar are used: the stringers used are flatted cedar. The cover is 3 in. hemlock plank. A guard rail is provided for each side. The approaches are well filled. The labor on these two bridges cost $345.56, and the material used was supplied at a cost of $154.02. The work was done under the supervision of Samuel Cole, Inspector Colonization Roads.

Sault Ste. Marie District Bridges.

Root River Bridge.—The Root River bridge is constructed over the Root River in the Township of Tarantorus. At this point a big jam caused a washout at the old bridge, and the old structure was extended to cross the new channel. A new reinforced concrete girder bridge of 30 ft. clear span is constructed over the new channel, and an 8 ft. concrete arch was constructed on the old channel. The abutments are concrete. The abutments and wing walls are on hard pan foundations. The 6 in. concrete floor is reinforced with No. 6 floor mesh, and is supported by concrete girders 26 in. deep, reinforced with Kahn bars. The two middle girders are 16 in. wide and the two outside girders are 14 in. wide. The bridge and culvert are supplied with a pipe railing. Considerable filling was necessary, as the old bridge was 64 ft. long. The bridge, culvert and filling cost $2,575.00. The work was done under the supervision of J. O. Coates, Foreman Public Works. This is a class of structure that might profitably be adopted for highway bridges up to 35 ft. span. The construction is simple; no skilled labor is required other than a good concrete man. The bridge is comparatively cheap and is everlasting.

Kenora District Bridges.

Black Sturgeon Lake Bridges.—This bridge is constructed across the Black Sturgeon Lake, in the township of Mellick. The bridge will afford the settlers in the township of Mellick access to Kenora. The bridge is a pile trestle 292 ft. long, and consists of 17 spans 15 ft. centre to centre. The bents are of piles, 5 piles in a bent. The floor of the bridge is 14 ft. above the water level. Cribs are built at each end on rock foundations. The caps and stringers are flatted pine, and the covering is flatted tamarac 5 in. thick. The bridge is supplied with a substantial railing—posts 3 x 4, braces 2 x 6, and hand and hub rail 3 x 6, all of tamarac. The flooring is fastened down with half-inch spikes, 10 inches long. Caps are drift-bolted with 5-8 drift bolts, 18 in. long. The work is all done in a workmanlike manner. The bridge is substantial and promises to give long service. The entire cost for work and material is $1,179.10. The work was done under the supervision of James Fraser, Inspector Colonization Roads for the District of Kenora.



Removing Rock at Moon Chute, Muskosh River, below Bala Falls.

Removing Rock at Moon Chute, Muskosh River, below Bala.

Oxdrift Bridge.—This bridge is built over the Moose Creek at Oxdrift, about 75 miles east of Kenora. The bridge is 98 ft. long and 13 ft. 6 in. high at the centre. The floor system is supported on frame bents resting on mud sills. The mud sills are supported on tamarac timbers. The central span is 26 ft. long, supported by a king truss. There are 4 spans of 15 ft. each, 6 lines of 3 x 12 joist are used, and the covering is 3 in. tamarac plank. A substantial guard rail is supplied. The bridge was constructed under the supervision of James Fraser, Inspector Colonization Roads, at a cost of $656.90.

Winnipeg River Bridge.—This bridge is constructed over Darlington Bay, an arm of the Winnipeg River, on the line of the Pellatt township road immediately west of Keewatin. The bridge consists of 7 spans 40 ft. clear, supported by a queen truss, on double pile bents set at 8 ft. centres. There is 80 ft. of pile trestle, bents set at 16 ft. centres, and a swing span giving a clear width of 48 ft. The pivot pier of the swing span is set on solid rock on the east shore. The construction of this bridge is progressing slowly. In the middle of the bay the water is 55 ft. deep. Piles of sufficient strength could not be secured locally. The piles used are British Columbia fir, from 60 to 75 ft. long. Even with this extreme length, a number of piles required to be spliced. Pile driving in this great depth of water was a slow and expensive work. The pile driving is nearly completed, the caps, corbels and bottom chords are in place. The timber is all on the ground. A contract has been given for the steel swing span, to be erected before the 1st day of May, 1911. The work is being done under the supervision of James Fraser, Inspector Colonization Roads for the District of Kenora.

Muskoka Lakes Works.

Bala Dam and Moon Chute.—The work on the new concrete dam at Bala Falls was completed. A new winch for handling the stop-logs was purchased from Wm. Kennedy & Sons of Owen Sound, at a cost of $1,100.00. The old winches were shipped to the new dams at Dog Lake. Pratt & McDougall have not yet completed their contract as an old bridge pier yet remains, the removal of which is covered by the contract. About three miles below Bala, the Muskosh River, which is the outlet of the Muskoka Lakes, flows through a narrow gorge known as "Moon Chute." The Chute could not accommodate the increased flow through the new dam without raising the level of the river between the Chute and the dam. It was therefore necessary to provide a better channel at the Chute. This was accomplished by blasting a number of ledges of rock, and removing the rock to the low water level. The work was done by day labor under the supervision of Wm. Lowe, Inspector Colonization Roads.

La Grasse River Bridge.—A grant of $1,500.00 was voted to the Township of East Hawkesbury to assist in building a bridge over the La Grasse River on the interprovincial boundary between Ontario and Quebec. The bridge is a steel span 85 ft. 6 in. long, supported on concrete abutments on pile foundations. The bridge has a clear width of 14 ft. The floor is of concrete; the abutments are 18 ft. high. The grading of the approaches was done by the township; the steel was supplied and erected, the concrete floor laid, and the foundations and concrete abutments built, by the Jenks-Dresser Bridge Company of Sarnia, at a contract price of $4,385.00. The bridge was examined by an Engineer of this Department in September, 1910, and the work was found to be completed in a workmanlike manner. The grant of $1,500.00 was accordingly paid over to the Treasurer of the Township of East Hawkesbury.

Removing Obstructions, Monroe Rapids.

The contract let to G. H. Burgess for removing rock at Monroe Rapids, in the Mississippi River, was not completed until after the close of the financial year, 1909. The work was continued and completed early in November and the balance of the contract price—$400.00—was paid to the contractor.

Removing Obstructions at Ferguson Falls.

The work of deepening the channel of the Mississippi River at Ferguson Falls, begun in 1909, was continued in 1910 under the supervision of Henry W. Parker, Foreman of Public Works, who had charge of the work in 1909. The work was done by day labor, and $922.72 was expended. A further extension of the work is necessary to render the work already done thoroughly effective.

Improving Bonfield Creek.

This work consisted in clearing and ditching a creek bed in the township of Bonfield. The ditch is intended to drain the road between Concessions 10 and 11. The work was commenced at a chute in the north part of the 11th Concession, and extends south through Lot 3, a distance of 240 rods. The money appropriated was not sufficient to extend the work to the Concession Line. About 80 rods of ditching yet remains to be done. The work was done by day labor under the supervision of Stephen Beaulieu, at a cost of $250.00. A second branch of this work was clearing and ditching a creek on Lots 6 and 7 in the 10th and 11th Concessions, to drain a section of the Bonfield road. About 200 rods of the creek was opened up at a cost of $250.00. The work was done under the supervision of F. X. Poliquin.

Improving Sucker Creek in Rama Township.

This work consists in clearing and ditching in the outlet of Sucker Creek. The upper reaches of the creek have been opened up, but no provision was made for an outlet through the 9th and 10th Concessions. The work begins at low water lake level, about the middle of Lot 24 in the 9th Concession, and extends up stream across Lots 24, 23 and 22, to the line between Concessions 9 and 10, a distance of 260 rods. The work was done by day labor. Two gangs of men were employed under the supervision of Thos. Mulvihill and Joseph McGrath, foremen, at a cost of $498.90.

Nottawasaga River Breakwater.

Some five years ago a log jam formed in the Nottawasaga River on Lot No. 19 at the line of the 1st and 2nd Concessions of Sunnidale. The log jam caused the river to overflow on Lot 11, and a serious break occurred in the north bank of the river. Before the flood subsided the break increased in size, forming a new channel about 60 ft. wide and 10 ft. deep. Each succeeding year, during the period of high water, a flood runs through the break, with the result that a number of farms are seriously damaged. On report to the Department a grant of $500.00 was recommended to assist the township of Sunnidale in the building of a permanent dam across the "break." Plans for an earth dam with a concrete core were prepared by the Department of Public Works. The work was carried out by the township of Sunnidale in accordance with the plans prepared, at a cost of $915.16.

The work was examined by an Engineer of this Department during the month of October, 1910. The work was found to be done in a satisfactory manner and the grant of $500.00 was paid to the Treasurer of Sunnidale.

Removing Obstructions, Saugeen River.

For a great number of years a serious obstruction has existed in the Saugeen River on Lots 59 and 60 in the 2nd Concession west of the Garafraxa Road, in the Township of Bentinck. A log jam had formed at this point and became fixed. Year after year the accumulation of debris went on, until the channel became filled from bank to bank. The channel is from 80 to 100 ft. in width, and is about 6 feet deep. The log jam extends over a length of about 60 rods. The sum of $900.00 was voted to remove the obstruction. The work was undertaken by the Township of Bentinck. Contracts were let and the necessary arrangements made for carrying out the work. The work was commenced in 1909, but was not completed. The appropriation was revoted, and the work was completed during 1910. The work was examined by an Engineer of this Department and on the reported completion, the sum appropriated for the work, $900.00 was paid to the Treasurer of the Township of Bentinck.

Dredging Running Creek.

The sum of $5,000.00 was voted in the Estimates of 1910, to assist in dredging out a channel through a dead water course, known as "Running Creek," in the Township of Chatham. In bygone ages this creek was an outlet for the north branch of the Sydenham River. When the Lake levels receded, the flow of water through this channel decreased. As the flow decreased a growth of vegetation began, which soon entirely stopped the flow of water. This creek extends from the north branch of the Sydenham River in a north-westerly direction to the Channel Ecarte, a distance of about three miles. The Town of Wallaceburg, is situate at the junction of the north branch with Sydenham River, and Running Creek joins the north branch near the town. At the junction of the north branch and the Sydenham River, serious ice jams are of frequent occurrence. When these ice jams occur the Town of Wallaceburg is usually submerged. Running Creek then redeems its name and floods the country to the west of Wallaceburg. The creek passes close to the Skinner Drainage System, a pumping scheme brought into being at a heavy cost. The creek floods are a serious menace to the Skinner Drainage Scheme, and interfere materially with the effectiveness of the drainage work. It was decided to attempt the opening up of a channel through the creek bed deep enough to allow the water from the north branch to resume its original course. A committee was formed, consisting of D. A. Gordon, M.P., John S. Fraser, K.C., William Trotter and Isaac S. Skinner, to undertake the work. The Provincial and Federal Governments were approached, and a conditional grant of $5,000.00 obtained from each. A contract was entered into with the Chatham Dredging Company to construct a drain 50 feet wide and 6 feet deep below low water level, from the north branch to the Channel Ecarte, a distance of about three miles, for the sum of $10,000.00. Work was started on the contract in the Fall of 1910. The work was examined on October 27th by an Engineer of this Department, who reported about $3,500.00 worth of work done at that date. On the report of the Engineer the sum of $1,500.00 was paid on the contract to the Chatham Dredging and Contracting Company. It is expected that the work will continue during the winter, and the full completion of the work in the early summer of 1911 is looked for.

Regulating Dams at Dog Lake.

The work on the dams at Dog Lake described in the Engineer's Report for 1909 was continued during the year. The regulating dam is completed and the stop-logs in place. The overflow dam is raised to a height sufficient to ensure ample storage of water. Work has been suspended on the overflow dam, as the supply of cement stored at the works has given out and a new supply of cement cannot be brought in until the roads freeze up. When cement is obtained, the early completion of the overflow dam is looked for. An agreement has been entered into with the present contractors, Messrs Wm. and E. V. White, to construct dams 1 and 4 on a percentage basis. The contractors are to use their own plant and supervise the work under the direction of the Engineer in charge.

Lockmasters' Returns.

The Lockmasters in charge of the different Locks reported on the season's business as follows:

Port Carling Lock.—Steamboats, 4,196; small boats, 726; scows, 746, and rafts or cribs of timber, 77.

Mary's and Fairy Lakes.—Steamboats, 702; small boats, 353; scows, 102, and rafts or cribs of timber, 54.

Magnetawan Lock.—Steamers, 834; small boats, 28; scows, 316, and rafts or cribs of timber, 38.

Maintenance of Locks, Dams, Bridges, etc.

Dredging Muskoka Lakes.—As the machinery from the old dredge was being installed in a new hull at Gravenhurst, dredging operations did not begin until about the 1st of May. Dredging was continued at Kemp's Narrows. Later in the season the dredge was removed to Port Carling and operated in that vicinity. In the fall the work was confined to the Muskoka River in the Bracebridge vicinity.

Port Carling Locks.—Before the close of navigation timber had been provided for renewing the lock gates at Port Carling. Immediately on the close of navigation the work of building and installing the new gates was proceeded with. The locks were ready for operation at the opening of the season. General repairs as were found necessary were made. The work was carried out under the supervision of C. R. Dolmage, Foreman of Public Works.

Port Sandfield Wharf.—An extensive addition was made to the wharf at Port Sandfield, and extra dockage facilities provided.

Huntsville Lock.—Considerable repairs were made on the gates at Huntsville Locks to strengthen them. The walls, which were in rather a shaky condition, were repaired, and serious leaks stopped up.

Port Sydney Dam.—Slight repairs were made at Port Sydney Dam, replacing decayed timber and stopping leaks.

Magnetawan Lock.—Such repairs as were found necessary to be made to make the Magnetawan Lock last through the season, were carried out The gates were strengthened and the most serious leaks stopped. Material for the new concrete lock, which is proposed to be constructed during the winter, is being placed on the site.

Ahmic Lake Dam.—New stop-logs to replace those worn out were provided at the dam at the outlet of Ahmic Lake. Decayed timbers were removed, and the structure generally overhauled and placed in a serviceable condition.

Regulating Dam at Outlet of Dog Lake, Thunder Bay District.

Regulating Dam at Outlet of Dog Lake, Thunder Bay District.

Bala Dam.—The stop-logs in Bala dam were equipped with castings to allow of properly operating the new winch. Channels were provided to protect the stop-logs from damage by log drives passing through dam.

Bala Bridge.—The cover of the bridge over the south channel at Bala was repaired. A new cover of 3 inch plank, 10 feet long, was laid on top of the old floor. The north end of the bridge was lowered three feet to ease the grade to the new subway.

High Bridge at Huntsville.—Small repairs were made on the approaches to the high bridge near the Locks. Wire netting was placed on each side railing as additional protection.

Huntsville Bridge.—The retaining wall of the south-west side of the Huntsville bridge, became undermined by the water, and 60 feet of the wall had to be rebuilt. The new wall is 7 feet 2 inches wide at the bottom. The foundation is concrete, 2 feet 8 inches high. Above the concrete the wall is of stone, set in cement mortar. At 2 feet 6 inches from the top, the wall is 4 feet thick. It is then battered to give a top width of 2 feet. The foundation is carried well below the frost line and to such a depth that there is no further danger from undermining. The grading was properly renewed and the work finished in a workmanlike manner.

Kashee Bridge.—The approaches to the Kashee Bridge in Morrison Township were completed in a proper manner.

Peninsula Canal Bridge.—The main pier at the north end of the bridge over the Peninsula Canal became undermined and was in danger of toppling over. The pier was underpinned and made secure for the season. This bridge will require to be renewed without delay.

Port Severn Bridge.—Small repairs were made to the bridge at Port Severn, renewing, covering and fixing up approaches.

Restoule River Bridge.—Lot 24, Concession 3, Township of Patterson. This bridge is 90 feet long. The covering was all renewed, a new truss built and a new railing put on. The piers were found to be in good condition.

Eagle Lake Bridge.—Lot 27, Concession 5, Township of Machar. 46 feet of this bridge was rebuilt, three new timber cribs were constructed and filled with stone, the end of the bridge was raised, approach rebuilt, and a new railing put on.

Squaw Lake Bridge.—Lot 1, Concession 6, McKellar Township. This bridge is 92 feet long. It was rebuilt of cedar timber; 4 piers were constructed and filled with stone; a substantial railing was put on, and the approaches graded.

South River Bridge, Himsworth.—The end of this bridge was repaired where a washout had occurred and the bridge made safe for travel.

Knoepfli Bridge.—This bridge was recovered, the approaches regraded and a new railing put on.

Ryerson Swing Bridge.—Some filling and rip-rapping were done at the north-west part of the bridge to protect the bridge pier from the action of the water.

Hurd's Bridge.—This bridge was re-floored and the approaches repaired.

Wissi-Wassa Lake Dam.—This old dam is located at the outlet of Wissi-Wassa Lake, in the Township of Chisholm. It has been in existence for a great many years. It was built for a storage dam to facilitate the driving of logs on the Wissi-Wassa River. An arrangement was made with the owners of the dam some years ago under which the owners surrendered all their rights in the year 1910. At the close of the spring drive the dam was entirely removed under the direction of the Public Works Department.

Depot Creek Bridge.—This bridge is on the south shore road, Lot 23, Concession 18, Township of Chisholm. The bridge was rebuilt. It is 30 feet long.

2 abutments, 7 x 14 feet, 6 feet high, filled with stone. It is covered with 6 inch flatted cedar on cedar stringers. The approaches through the flats were graded for a distance of 36 rods, and 3 small culverts were built for drainage purposes.

Dixon's Creek Bridge.—The old bridge over Dixon's Creek in Mattawan Township, on the Lesrables road, had outlived its usefulness and had to be replaced. It has a 16 foot span, 2 shore piers, 7 x 14 feet, 6 feet high, stone filled. It was reconstructed with cedar timber, and covered with flatted cedar 6 inches thick. The approaches were well graded and all work done in a highly satisfactory manner.

Griffith's Bridge.—This bridge is 360 ft. long and was built about ten years ago. The flooring is worn out and has had to be renewed throughout.

Latchford Bridge.—The flooring on this bridge, which is 200 ft. long, was renewed.

Brudenell Bridge.—This bridge is 50 ft. long and was renewed complete: new cribs were built and filled with stone, heavy cedar stringers were provided, a 3-in. plank floor laid, and a substantial railing erected. The approaches were graded and the bridge put in a serviceable condition.

Combermere Bridge.—The floor on this bridge was badly worn from traffic. It was decided to double the floor, and a new wheel track was provided by putting on a second layer of 2-in. plank, 8 ft. long.

Jewellville Bridge.—This is a new structure over a creek at Jewellville. Three cedar cribs 8 ft. x 12 ft. were built and filled with stone, five lines of heavy cedar stringers were used, the flooring was 3 in. plank, and a substantial railing was provided. The approaches to each end of the bridge were properly graded.

Pearson's Bridge.—The work of replacing the bridge that was carried away by an ice jamb in 1909 was completed this year. A large quantity of stone was hauled and placed in and around the pile piers to render them safe from the ice pressure. Watchmen were stationed at each of the White River bridges and kept there during the entire time of the log drives. No trouble was experienced.

Shorts and Marter Bridges.—These bridges, lately constructed, are on the south boundary of the Township of Marter. The bridges were found to be too low and were in danger of being carried away by high water. The decks of both bridges were raised 3 ft., and the approaches raised accordingly.

Charlton Bridges.—At the T. and N. O. Railway Station at Charlton changes were made to better the existing condition of the roadway. Three culverts were put in, and the Mill bridge repaired.

Hilliard-Harley Township Bridges.—Two bridges were constructed over creeks on the townline between the Townships of Hilliard and Harley. The bridges are solidly built and the approaches well graded.

Field Bridge.—The floor system of the Field bridge was entirely renewed during the season.

Filiatrault Bridge.—The bridge is 425 ft. long. It is a pile trestle, 4 piles to a bent, the width is 16 ft. The approaches, 87 ft. long, and from 1 to 5 ft. high, were built up of logs and covered with earth.

Espanola Bridge.—The west wing wall of the north abutment of the Espanola bridge was repaired. A rock fill was placed in front of the wing wall to strengthen it.

Indian Point Bridge.—The pier at the west end of the swing span was raised about 6 in., the pivot pier was levelled up, and some filling done at the approaches.

Blind River Bridge.—The abutments of the bridge over the west branch of Blind River, in the Township of Cobden, were repaired. New stringers were put on three spans, and a new floor of 3 in. plank placed on the bridge.

Dausey Bridge.—When the Dausey bridge was erected in 1909 a temporary floor was laid, using the covering of the old bridge. This year a new flooring of 3-in. plank was placed on the bridge.

Jack's Rapids Bridge.—Over the Thessalon River, Sec. 15, Lefroy Township, was rebuilt. The bridge is 70 ft. long over all, with a central truss span 50 ft. long. The cribs were built up from the water line in cedar timber. The cribs were filled with stone, and wing walls were built on the upstream side and backed up with stone. The deck was renewed in good timber, and the approaches well filled.

McGuire's Bridge.—On lot 2, concession 3, of Plummer. This bridge, 18 ft. long, was rebuilt, pile bents, caps and stringers, flatted cedar, 3-in. plank covering. A substantial railing was put on and the approaches well graded.

Kenehan's Bridge.—On lot 3, concession 4, Plummer. This is a new bridge 16 ft. long, pile abutments, caps and stringers, flatted cedar; covering is 3-in. plank.

Morin and Otter Road Bridges.—This work consisted of building four new bridges on the Morin and Otter Road, in the Township of Morin, on lot 8, in the 1st and 2nd concessions. No. 1 is 48 ft. long, No. 2 is 41 ft. long, and No. 3 is 48 ft. long. The middle supports are framed bents resting on mud sills. The stringers are flatted pine and the covering is 6-in. flatted pine. No. 4 bridge is 24 ft. long. Heavy flatted pine stringers are used, resting on mud sills on each bank. The covering is flatted pine. The approaches to all the bridges were graded, and the soft places in the ravines were cross laid, and about 80 rods of road graded.

Clarke's Bridge, Township of Lefroy.—This bridge is 96 ft. long. A new flooring of 3-in. plank was put on. Guard railings were placed on each side; the approaches were built up, 84 yards of stone and 80 yards of gravel being used in the work.

Stewart's Bridge, lot 7, concession 2, of Aberdeen, was repaired. The abutments were overhauled and a new cover provided.

Webbwood Bridge.—The approaches to the Spanish River bridge at Webbwood are on a very heavy grade. The clay is of a quality easily affected by the action of water. The side gutters were neglected, and serious washing out occurred. The approaches were regraded and the gutters put in proper condition.

Vankoughnet Bridge.—This is a new bridge 12 ft. long, the abutments are cedar cribs, earth filled; stringers of 10 in. flatted cedar are used. The covering is 3-in. pine plank. A railing of 4-in. x 4-in. pine is provided. The approaches are well graded and gravelled. The grades on the approaches were eased off by cutting the banks about 3 ft. at each end of the bridge.

Slate and Stanley Bridges.—The usual precautions were taken to protect the Slate and Stanley bridges from ice jams. Watchmen were stationed at each bridge, and as the ice floes became dangerous dynamite was used to loosen up the ice. Serious trouble was avoided.

Gull River Bridge.—This is a bridge over the Gull River, on the road between Dryden and the Transcontinental Railway. The old bridge was found to be unfit for repair. The new bridge is 82 ft. long, 16 ft. wide, and built 8 ft. above water. The abutments are timber cribs, well drift-bolted. The stringers and flooring are flatted tamarac. The approaches are well graded, and the road at each side of the bridge was put in proper condition for travel.

Keewatin Bridge.—The bridge over Portage Bay at Keewatin is difficult of access from the west end owing to the steep grade. The C. P. Railway crossing is close to the end of the bridge. The only way to improve the grade was to raise the end of the bridge. The change in grade was made at a point 50 ft. from the end

of the bridge. The end was raised 3 ft. and the approach graded accordingly. The railway crossing is now reached on a 6 per cent. grade.

Keewatin Dam.—The Province is, by agreement, obliged to keep the deck of the Keewatin Dam in repair. The covering of the old deck had become very dangerous through decay. The new floor was laid on top of the old one and well spiked. It consists of 3-in. tamarac plank, dressed on the upper side and laid with broken joints. The work is done in a first-class manner, and the deck is good for at least ten years of further service.

Extension of Railways.

During the year 1910 there were completed and opened for traffic in the Province of Ontario 357.52 miles of new railway, making the total mileage in operation within the Province 9,017.94.

Transcontinental Railway.—The number of miles of grading done in 1910 is 163, and of track laying 156, making a total to date of 531 miles grading and 383 miles track laid on main line, exclusive of sidings and yards. The total distance of 757.95 miles across the Province of Ontario is located and under contract.

Algoma Central and Hudson Bay Railway Co.—New main line constructed consisted of 31.6 miles, being made up of 12.6 miles from mile 69 to 81.6, and 19.0 miles from mile 170.5 to 151.5. On the Magpie Branch 5.4 miles were built from mile 171.5 northerly, and four more miles are under construction. From Hawk Lake to Hobon, the junction with the Canadian Pacific Railway, 24.5 miles are under construction and an additional 70 miles on the main line from mile 81.6 to 151.6 is being completed, making a total of 98.5 miles under construction. Survey parties have located 15 miles north from the Canadian Pacific Railway at Hobon, and are now working towards a junction with the National Transcontinental Railway, which will be about 106 miles from Hobon. In the Spring explorations will be made for a line from the National Transcontinental to Hudson Bay.

Manitoulin and North Shore Railway.—From Gertrude to Crean Hill, a distance of 10 miles was constructed during the past year, and the remainder of the line from Crean Hill to Little Current, a distance of 61 miles, is under contract.

Michigan Central Railroad Company.—No additional lines were built by this Company in the year 1910.

Canadian Northern Ontario Railway.—On the Toronto-Ottawa Line track has been laid for a distance of 72 miles, while the additional distance of 61 miles from Toronto to Deseronto is under contract, and expected to be completed by the middle of the summer.

The Sudbury-Port Arthur Line is being rushed ahead. A large force of men are on the work, and 15 miles of grading has been completed.

The Board of Railway Commissioners has approved of the location of nearly 300 miles of this line. Survey parties, consisting of nearly 100 men, assisted by a large staff of draughtsmen, are rapidly locating this last link which, when built, will connect up the Canadian Northern lines in Eastern Ontario with those in the West, giving another line to Winnipeg and beyond.

On the Orillia Branch the balance of the line, 1.69 miles to Atherly Junction, has been completed, mileage 5.71 to 7.4.

Operations have been commenced on the Toronto, Niagara & Western Railway, but only two miles of grading were completed before weather conditions forced the suspension of the work.

The mileage under contract is as follows: Toronto-Ottawa, 133 miles; Sudbury-Port Arthur, 15 miles; Toronto-Niagara and Western, 10 miles.

The following mileage is located, but not under contract: Port Arthur-Sudbury, 462 miles; Ottawa-Key Harbor, 295 miles; Deseronto-Ottawa, 122 miles; Toronto-Niagara and Western, 74 miles.

Grand Trunk Railway System.—An extension of 9 miles from Tiffin, on the Belleville-Midland line, was made to Wyevale on the Penetang-Toronto Line.

Canadian Pacific Railway.—During 1910 a connection 2.6 miles in length was built from Islington to a junction with the Grand Trunk Railway a short distance west of Mimico. The Tillsonburg, Lake Erie and Pacific Railway was extended from Code Junction to Ingersoll, a distance of about five miles. An extension of the Georgian Bay and Seaboard Railway was made from opposite Maple Island to the water front, a distance of 1.46 miles. Double tracking of the main line from Lambton to Islington, 3.2 miles, was carried out. In addition to the above work the Company has under contract to construct the main line of the Georgian Bay and Seaboard Railway from its present terminus at Coldwater Junction to a junction with the main line of the Ontario and Quebec Railway, a distance of approximately 75.8 miles.

Central Ontario Railway.—An extension of 7 miles was made by this Company.

Temiskaming and Northern Ontario Railway.—Considerable work has been done during the past year with the object of improving the line. Grade reduction in a general way was carried out from North Bay to New Liskeard. A cut off has been located from North Bay to mileage 35 and also mileage 48 to 50, mile 62½ to 66½. A cut off 2,067 feet long was constructed between mile 60 and 61. The grading of the New Liskeard spur, about one mile long, was completed. Double track 5 miles in length, between Cobalt and Haileybury, was put in operation. At Cochrane an 8-stall Round House, Machine Shop, Bunk Room, Coaling Station, and petty stores building, were added. A 50,000 gal. steel tank was erected at North Bay. To supply water at Swastika an hydraulic ram was installed on the rapids of the Blanche River. Increased siding accommodation was provided at Tomiko Mills, Tomiko, Temagami, Cobalt and Kelso. A new brick passenger station was completed at Cobalt, and a new station at Cochrane was opened. At Kelso a combined freight and passenger station was erected. A new steel trestle was put in at mile post 119, at the second crossing of the Wataybeeg River, and a 75-foot turntable was installed at Cochrane. A spur line from North Bay Junction with the C. P. R. to Nipissing Junction with the G. T. R. was located and plans, specifications and estimates prepared. Preliminary surveys for a branch to Porcupine were made as far as the Mattagama River, a distance of about 40 miles.

Essex Terminal Railway.—Track laid during the year, 1.5 miles; interlocking plants were installed at the crossings of the Windsor and Lake Erie Railway, also at the crossing of the Windsor, Essex and Lake Shore Electric Railway. Three crossings are controlled from one tower at this plant. The three crossings are the Electric and the C. P. Ry., the Electric with the Terminal Railway and the crossing of the Terminal and the C. P. Ry. The Essex Terminal Railway is also constructing a branch from Walkerville, through what is known as the "Manufacturing District" of Windsor. The branch is 1.5 miles in length.

REVISED STATEMENT OF RAILWAY MILEAGE IN ONTARIO TO DECEMBER 31ST, 1910.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation.	Completed since Confederation.	At present under construction.	Total length in operation of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
1	Grand Trunk Railway, Main Line	East Prov. Bound ..	Point Edward.	457			
2	do Buffalo and Lake Huron Branch..	Fort Erie	Goderich	158			
3	do London Branch	St. Mary's.....	London	23			
4	do Galt and Doon Branch.....	Galt	Berlin	7	4.5		
5	do Waterloo Junction Railway.	Waterloo.....	Elmira		10.25		
6	do Toronto and Nipissing Branch	Toronto.....	Coboconk		88		
7	do Midland Railway, Main Line.....	Port Hope.....	Midland City.....	65	54.53		
8	do do Peterboro' Branch	Millbrook	Lakefield	13	9		
9	do Lake Simcoe Junction.....	Stouffville	Jackson's Point....		26.5		
10	do Whitby, Port Perry and Lindsay..	Whitby	Lindsay.....		46		
11	do Victoria Railway.....	Lindsay.....	Haliburton.....		55.81		
12	do Grand Junction Railway	Belleville	Peterborough.....		64.65		
13	do Belleville and North Hastings.....	Madoc Junction.....	Eldorado.....		22		
14	do Toronto and Ottawa.....	Madoc.	Bridgewater		9		
15	do do Manilla Link.	Wick	Manilla.....		6.5		
16	do do Omemee Link .	Omemee	Peterborough		14		
17	do Port Dover and Lake Huron.....	Port Dover.....	Tavistock		55.68		
18	do South Norfolk Railway	Simcoe	Port Rowan		17		
19	do Chemong Branch	Peterborough	Chemong Lake		9		
20	do Stratford and Huron.....	Stratford	Wiarton		106.27		
21	do Owen Sound Extension.....	Parkhead Junction..	Owen Sound		12.40		
22	do Georgian Bay and Wellington	Palmerston	Durham		26		
23	Grand Trunk Railway } Great Western Div. } Main Line	Suspension Bridge..	Windsor.	229			
24	do Toronto and Hamilton Branch.....	Toronto	Hamilton	39.5			
25	do Loop Line Division.....	Glencoe.....	Fort Erie		145		
26	do Kingscourt and Glencoe Link	Kingscourt Junction	Glencoe		20.6		
27	do Sarnia Branch.....	Komoka	Sarnia.....	51			
28	do Petrolea Branch.....	Wyoming	Petrolea	7			
29	do Brantford Branch.....	Harrisburg	Brantford.....	8			
30	do Brantford and Norfolk.....	Brantford.....	Tillsonburg		35.88		
31	do Lynden to Brantford.	Lynden	Brantford		4.12		

REVISED STATEMENT.— Continued.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation.	Completed since Confederation.	At present under construction.	Total length in operation of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
32	Grand Trunk Railway, Great Western Div. } Wellington, Grey and Bruce	Harrisburgh	Southampton	27	102		
33	do do S. Extension.	Palmerston	Kincardine		66		
34	do London, Huron and Bruce	Hyde Park Junction.	Wingham		69.75		
35	G.T.R. Western Div.—Welland Railway	Port Colborne	Port Dalhousie	25			
36	Northern Railway, Collingwood Line	Toronto	Meaford	94	21		
37	do Muskoka Branch	Barrie	Gravenhurst		53		
38	do Hamilton and Northern, Main Line	Port Dover	Allandale		135.3		
39	do do do Collingwood	Clarksville	Collingwood		40		
40	do North Simcoe Junction	Colwell	Penetanguishene		33.34		
41	do Midland Branch	Wyevale	Tiffin		9		
42	Northern and Pacific Junction Railway	Gravenhurst	La Vause		111.5		
43	Magnetawan River Railway	Burks'Falls Station, G.T.R.	Burks' Falls Village		1.01		
44	Toronto Belt Line Railway, Eastern Section	Don Station, G.T.R.	June. Northern Ry.		8.50		
45	do Western Section	Carleton, on G.T.R.	Swansea		4.33		
46	Canada Atlantic Railway	East Prov. Bound	Ottawa		68.08		
47	do Ottawa, Arnprior & Parry So'nd Ry.	Ottawa	Scotia Junction		212.60		
48	do Parry Sound Colonization Ry	Scotia Junction	Depot Harbor		51.20		
49	do Central Counties Railway	Glen Robertson	Hawkesbury		21		
50	do do do	South Indian	Rockland		17		3,070.8
51	Canadian Pacific Railway, Main Line	Ottawa	West Prov. Bound.	57	1,150		
52	do do	Ottawa	East Prov. Bound.		66.40		
53	do Algoma Branch	Sudbury Junction.	Sault Ste. Marie		180.25		
54	do Brockville and Ottawa Railway	Brockville	Carleton Place	46			
55	do St. Lawrence and Ottawa Railway and Chaudiere Branch	Prescott	Ottawa	59.5			
56	do Ontario and Quebec Railway	Toronto Junction	East Prov. Bound.	12	281.25		
57	do do Don Branch	Leaside Junction	Toronto		5		
58	do do Detroit Extension	London	Windsor		112.50		
59	do Credit Valley Railway, Main Line	Toronto	St. Thomas		119.13		
60	do do Mimico Branch	Islington	Mimico		2.60		
61	do do Orangeville Branch	Streetsville Junction	Elora & Orangeville		61		
62	do do Guelph Branch	Campbellville	Guelph		15		

REVISED STATEMENT—Continued.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation	Completed since Confederation.	At present under construction.	Total length in operation of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
63	Can. P. Ry. Toronto Grey & Bruce, Main Line....	Toronto	Owen Sound	.....	122	.....	.....
64	do Teeswater Branch....	Orangeville.....	Teeswater.....	.....	72	.....	.....
65	do Wingham Branch.....	Glenannan	Wingham.....	.....	4.75	.....	.....
66	do West Ontario Pacific Railway.....	Woodstock.....	London	.....	26	.....	.....
67	do Atlantic and North-West Railway..	Renfrew.....	Eganville.....	.....	19.25	.....	.....
68	do Lindsay, Bobcaygeon and Pontypool Railway.....	Burketon	Bobcaygeon	.....	38.79	.....	.....
69	do Sudbury and Kleinburg Branch	Bolton.....	Romford Junction...	.....	226.20	.....	.....
70	do Guelph and Goderich Railway.....	Guelph	Goderich.....	.....	88	.....	.....
71	do do Listowel Branch....	Listowel Junction ..	Listowel.....	.....	16.10	.....	.....
72	do Walkerton, Lucknow Railway.....	Saugeen Junction ..	Walkerton	.....	37.70	.....	.....
73	do Tilsonburg, Lake Erie & Pacific....	Port Burwell	Embro	.....	46.11	.....	.....
74	do St. Mary's & Western Ontario Ry .	Embro	St Mary's.....	.....	15.90	.....	.....
75	do Georgian Bay & Seaboard Ry.....	Victoria Harbor....	Junction with O. & Q.	.....	14.66	75.8	2,895.09
76	Michigan Central Railway, formerly Canada Southern, Main Line.....	Windsor	Suspension Bridge .	.....	226.80	.....	.....
77	Michigan Central Ry., St. Clair Branch.....	St. Clair Junction .	Courtright	.....	62.2	.....	.....
78	do do Amherstburg Branch.....	Amherstburg.....	Essex Centre	.....	15.7	.....	.....
79	do Oil Springs Branch	Oil City Junction...	Eddy's	.....	5.2	.....	.....
80	do Petrolea Branch	Petrolea Junction ..	Petrolea.....	.....	4.9	.....	.....
81	do Leamington & St. Clair Branch.....	Comber..... ...	Leamington.....	.....	15.9	.....	.....
82	do Fort Erie Branch	Welland Junction ..	Fort Erie.....	.....	17.4	.....	.....
83	do Niagara Branch.....	Fort Erie.....	Niagara	30	.....	.....	378.10
84	Cobourg, Peterboro' & M'mora Ry., M'mora Line..	Cobourg	Harwood	14.5	.....	.....	14.50
85	Kingston & Pembroke Railway.....	Kingston	Renfrew.....	.....	103	.....	103
86	Prince Edward County Railway.....	Picton	Trenton and G.T.R.	.....	32.44	.....	.....
87	Central Ontario Railway	Trenton, at G.T.R..	Maynooth.....	.....	110	20	.....
88	Ontario and Belmont and Northern Railway	Central Ontario Ry.	Belmont Mine	.....	9.57	.....	152.01
89	Bay of Quinte Ry., formerly Napanee, Tamworth and Quebec...	Deseronto.....	Bannockburn	.....	78.45	.....	.....
90	Bay of Quinte Ry., Harrowsmith Branch.....	Yarker.....	Sydenham	.....	11.37	.....	.....
91	do Old Line	Deseronto.....	Grand Trunk Ry...	.....	3.5	.....	93 32
92	Nosbonsing and Nipissing Railway..	Lake Nipissing (S.E. Bay)	Lake Nosbonsing...	.....	5	.....	5.00

REVISED STATEMENT—Concluded.

No.	Name of Railway.	Terminal Points.		Completed prior to Confederation.	Completed since Confederation.	At present under construction.	Total length in operation of each railway or system of railways in miles.
		From	To	Length in miles.	Length in miles.	Length in miles.	
93	Irondale, Bancroft and Ottawa Railway	Kinmount	Bancroft		45		45.00
94	Brockville, Westport and Sault Ste. Marie	Brockville	Westport		45		45.00
95	Lake Erie and Detroit River Railway	Walkerville	St. Thomas		126.85		
96	do Erie and Huron Railway	Rondeau	Sarnia		70.47		
97	do London & Port Stanley Railway	London	Port Stanley	25			222.32
98	Canadian Northern Railway, formerly Port Arthur, Duluth and Western Railway, and Ontario & Rainy River Railway, Main Line	Port Arthur	West Prov. Bound		287		
99	Canadian Northern Railway, Duluth Extension	Stanley Junction	Gun Flint Lake		66.54		
100	do do James Bay Railway	Canada Atlantic Ry.	Parry Harbor		3.7		
101	do do Toronto & Sudbury Line.	Toronto	Sudbury		265		
102	do do Key Branch	Key Junction	Key Harbor		6.2		
103	do do Hutton Branch	Sudbury Junction	Sellwood Junction		27.8		
104	do do Garson Branch	Garson Junction	Garson Mine		3.7		
105	do do Orillia Branch	Orillia Junction	Atherly Junction		7.4		
106	do do Ottawa, Hawkesbury	Ottawa	Hawkesbury		58		
107	do do Port Arthur, Sudbury, Main Line	Sellwood Junction	Gowganda Junction		30.6	15	
108	do do Toronto-Ottawa	Toronto	Ottawa		72.0	61	827.94
109	Toronto, Hamilton and Buffalo Railway	Waterford	Brantford		18		
110	do do do	Brantford	Welland		62.5		80.50
111	Ottawa and New York Railway	Ottawa	Cornwall		55.00		55
112	Pembroke Southern Railway	Pembroke	Golden Lake		21.50		21.50
113	Algoma Central Railway	Sault Ste. Marie	Hobon		100.6	94.5	
114	do do Michipicoten Branch	Michipicoten Harbor	Main Line		22.10		122.7
115	Manitoulin and North Shore Railway	Sudbury	Crean Hill		23.5	61.0	23.5
116	Bruce Mines and Algoma Railway	Bruce Mines	Rock Lake		17		17
117	Temiskaming and Northern Ontario Railway	North Bay	Cochrane		252		
118	do do do Branch Lines				14 0		266
119	Huntsville and Lake of Bays Railway	Peninsula Lake	Lake of Bays		1.5		1.5
120	National Transcontinental Railway	East Prov. Bound	West Prov. Bound		383	375	383
121	Grand Trunk Pacific Ry., Lake Superior Branch	Fort William	Transcon'nent'l Line		188.77		188.77
122	Thessalon, Northern Ontario Railway	Thessalon Junction.	Thessalon		1.93		1.93
123	Essex Terminal Railway	Walkerville	M. C. Tunnel Yard		4.46	1.47	4.46
				1,447.5	7,570.44	703.77	9,017.94

STATEMENT OF ELECTRIC RAILWAY MILEAGE IN ONTARIO.

Number.	Name of Company.	Length of line.		Number of power houses.		Remarks.
		Completed.	Under construction.	Steam power.	Water power.	
1	Berlin and Waterloo.....3.02	.....	.....	1	.....	Power purchased from Berlin Central Heating Co.
	Leased Line, Berlin and Bridgeport.....2.50	5.52				
2	Brantford Street.....	7.33	.....	1	.....	Power supplied by the Cataract Power Co.
3	Brantford and Hamilton Electric Ry.	33.	.....	.....	.....	
4	Chatham, Wallaceburg and Lake Erie	36.6	.....	.....	.....	Power supplied by Chatham Gas Co.
5	Cornwall Street.....	6.5	.....	1	1	
6	Grand Valley	23.5	.....	1	.....	Power purchased from Cataract Power Co., Decew Falls.
7	Guelph Radial	6.	.....	1	.....	
8	Galt, Preston and Hespeler.....9.00					
	Leased Line, Preston to Berlin 10.75	19.75	.....	1	.....	
9	Hamilton Street.....	23.0	.....	.....	.....	Power supplied by the Cataract Power Co.
10	Hamilton and Dundas	7.25	.....	.....	.....	Power supplied by the Cataract Power Co.
11	Hamilton Radial	23.43	1	1	.....	
12	Hamilton, Grimsby and Beamsville..	27.5	.....	1	.....	
13	International Transit Co.....	3.3	.....	.....	.....	Sault Ste. Marie rent h. p. from Lake Superior.
14	Kingston, Portsmouth and Cataraqui.	8.	.....	1	.....	
15	London and Lake Erie Railway and Transporation Co.....	29.	.....	.....	.....	
16	London Street	33.3	.....	1	.....	
	Metropolitan (see Toronto and York Radial).....					
17	Mount McKay and Kakabeka Falls..	4.0	.....	.....	.....	
18	Niagara Falls Park and River.....	11.85	.....	.....	1	Subject to the control of Niagara Falls Park Commissioners.
19	Niagara, St. Catharines and Toronto.	32.78	7.	.....	.....	
20	Niagara Falls, Wesley Park & Clifton	4.5	.....	.....	.....	
21	Nipissing Central	5.1	.....	.....	.....	
22	Ottawa City Passenger	24.67	.....	.....	1	
23	Oshawa Railway.....	8.3	.....	.....	.....	
24	Port Arthur and Fort William	21.5	3.5	.....	1	Power purchased from Kaministikwia Power Co. and City of Port Arthur.
25	Peterboro Radial	6.	...	.....	2	Power obtained from Peterboro' Hydraulic Power Co.
26	Port Dalhousie, St. Catharines and Thorold	8.17	.....	.....	.....	
27	Sarnia Street.....	9.25	.....	.....	.....	Power hired.
28	Sandwich, Windsor and Amherstburg	25.073	.....	1	.....	
29	St. Thomas Street	7.5	.....	1	.....	Power purchased from Hydro Electric.
30	Toronto and York Radial, Toronto, Metropolitan Branch	59.17	.....	2	.....	
	Toronto and Mimico.....	10.69	.....	.....	.....	Power hired.
	Toronto and Scarborough	11.19	.....	.....	.....	Power hired.
31	Toronto Suburban	9.81	.....	1	.....	Power hired.
32	Toronto Street.....	107.7	26.	.....	.....	Niagara Power. Mileage includes turnouts and terminals.

STATEMENT OF ELECTRIC RAILWAY MILEAGE IN ONTARIO—Continued.

Number.	Name of Company.	Length of line.		Number of power houses		Remarks.
		Completed.	Under construction.	Steam power.	Water power.	
33	Windsor and Tecumseh Electric Ry.	10.	.....	.....	.....	Operated by the Sandwich, Windsor and Amherstburg Ry.
34	West Shore Electric.....	.....	30.	.....	.....	Huron and Bruce Counties.
35	Woodstock, Thames Val. and Ingersoll	11.5	.....	1	.....	Power purchased from Cataract Power Co., Decew Falls.
36	Windsor, Essex and Lake Shore Ry..	40.0	.....	1	.....	
	Total mileage.....	721.73	67.5	.....	.....	

Drainage Works.

Ruscom River Drain.—In 1909 the Chatham Dredging Company completed the dredging work in the Ruscom Channel. The dredge cut extends from the channel in Lake St. Clair south about 2½ miles, to a point about one mile south of the Base Line in the Township of Rochester. Between the dredge cut and the southerly end of Ruscom Drainage work there remained about three miles of unimproved channel. A grant of $800.00 was voted to improve this channel to render more effective the dredge cut. Mr. Oliva Ducharme was placed in charge of the work, which was carried out under the directions of the Public Works Department. The township of Rochester financed the work as it progressed, and on the full completion the grant of $800.00 was paid to the Township of Rochester. This work opens up the last section of the Ruscom River. The scheme was started about 1877. More than $100,000.00 has been expended in this one outlet. On the system of drains tributary to the Ruscom, upwards of $150,000.00 has been expended. The work was discouraging, but the result has amply justified the great undertaking, as thousands of acres of the best farming land to be found in the Province of Ontario have been brought to a highly profitable state of agriculture.

Pelee Island Drainage.—A grant of $2,000.00 was voted to assist the ratepayers in the Pelee Pumping Scheme. This pumping scheme was undertaken about 25 years ago for the purpose of reclaiming a large area of marsh land. The cost of the dredging, building and protecting embankments, and the installing of pumping machinery, was very heavy. Twice since 1885 the dredge cuts have been repaired and the pumping machinery renewed. The fixed charges are very oppressive, and the annual cost of operating the pumping machinery materially adds to the burden. On application of the rate-payers it was decided to assist them, and the sum of $2,000.00 was paid to the township of Pelee, to be applied on the debenture rate for 1910.

Aux Raisin River Drainage.—The Aux Raisin River Drainage Scheme in the townships of Cornwall and Osnabruck, is fully described in the Public Works report of 1908. The original estimate of the cost of the work was $49,005.62. In 1908 a grant of $4,000.00 was voted in aid of the scheme. The work was completed in 1909, at an entire cost of $130,600.00. The enormous advance of the actual over the estimated cost was a staggering blow to the ratepayers. On the presentation of their case to the Government, it was decided to grant further aid to the scheme, and a grant of $3,000.00 was paid to the Treasurer of the Township of Osnabruck, the initiating municipality.

Burnett Drain, in Elma.—The Burnett Drain in Elma is described in the Public Works Report of 1909. In that year a grant of $1,500.00 was voted to the scheme, but as the work was not completed only half of the grant was paid over. The work was continued in 1910. The work was examined by George Hogarth, an Engineer of the Department in October, 1910, and on his report that the work was substantially completed the balance of the grant, $750.00, was paid to the Treasurer of the Township of Elma.

Dawn and Enniskillen Townline Drain.—This drainage scheme is described in the Public Works Report of 1908. In that year a portion of the drain was constructed. Litigation delayed the completion of the work. Work on the scheme was resumed in 1910. The drain was examined by an Engineer of the Department in September, 1910, and found to be completed in a workmanlike manner. The balance of the grant, $1,000.00, which had been revoted in 1910, was accordingly paid over to the Township of Enniskillen, the initiating municipality.

Little River Drainage Works.—Little River is one of the trunk outlets in the County of Essex which are causing so much trouble of late years. It is the outlet for the central parts of Sandwich East and Sandwich South, comprising about 15,000 acres. Work was started on the drain through the Municipal Loan Fund. The opening up of the drain under The Municipal Drainage Act occurred in 1883. Since 1883 it has been improved and enlarged under four different by-laws. The creek enters the Detroit River through a marsh comprising about 1,100 acres. In 1887 this marsh was reclaimed through a pumping scheme. The cost of this scheme has been about $20.00 per acre. The pumping scheme is divided into two sections by the creek. Large embankments have been constructed on each side of the creek to prevent the creek water from entering into the pumping scheme. Of late years the constant improvements of the lateral drains in the Little River drainage basin has increased the flow in the main outlet to such an extent that the banks are unable to hold in the flow. The water has repeatedly broken through the banks and flooded out the pumping scheme. It was decided to obtain a new and sufficient outlet. The old, crooked course of the creek was abandoned. A new drain 50 feet wide and 8 feet deep was constructed in a straight course from the Detroit River south to the Grand Trunk Railway, a distance of one and one-half miles. Large and solid clay embankments are thrown up on each side of the dredge cut. It is confidently expected that the new outlet will take care of any flood that may be brought down to it. A grant of $2,000.00 was voted in the way of assistance to the scheme. The work was examined in October, 1910, and found to be practically completed. The grant of $2,000.00 was accordingly paid to the Treasurer of Sandwich East.

Eldon Township Drainage Work.—This drain, known as No. 1 Drain, in the Township of Eldon, commences on Lot 21 in the 2nd Concession. It flows south-west through Eldon, and enters the township of Thorah in the 8th Concession; thence it flows south-west, ending at Lot 4 at the front of the 7th Concession, where an outlet was reached satisfactory to both municipalities. A branch of the drain is constructed near the head of the work. It commences at the south-east corner of Lot 21 in the 2nd Concession, and runs east, joining the main drain at the centre of the west half of Lot 20 in the 2nd Concession of Eldon. The length of the main drain is 24,846 feet, and the length of the branch is 5,320 feet. The drainage area assessable comprises 3,320 acres, 1,935 acres in Eldon and 1,385 acres in Thorah. The estimated cost of the work was $10,713.00 The assessments for this drain are very heavy, running as high as $7.50 per acre. In 1910 a grant of $1,500.00 was voted in aid of this drainage scheme. In October, 1910, the work was examined by an Engineer of this Department, who reported the work about half completed. One half of the grant, $750.00, was paid to the Township of Eldon.

All of which is respectfully submitted.

I have the honour to be, Sir.

Your obedient servant,

A. J. Halford,

Engineer Public Works.

REPORT OF THE SUPERINTENDENT OF COLONIZATION ROADS.

To the Honourable J. O. Reaume,

Minister of Public Works,

Ontario.

Sir,—I have the honour to present a report of work accomplished during the year 1910, under the Colonization Roads' Branch of Public Works.

The sum of $452,745.33 has been expended in the construction of colonization roads, and the work done was generally satisfactory, as the appended detail will show, representing 193 miles of new road cut, cleared and stumped; 1,189 miles of repairs consisting of grading, gravelling and ditching on roads which had been previously opened, but not considered in condition for general traffic; and in addition to the above 101 bridges were constructed, aggregating a length of 5,985 feet.

Very satisfactory work was done this year by the Municipalities in which formerly Colonization Road Grants were made, now passing by-laws under the "Colonization Road Act," upon which the Government contributed one-half of the total expenditure, the Government proportion amounting to $80,500, eighty-one Municipalities taking advantage of this arrangement.

Good work was also done this year on the Trunk Roads under the new policy of prison labour, about 100 prisoners being engaged on roads from Matheson and Kelso to the Porcupine District, cutting out, stumping and clearing 23 miles of new road, grading and crosslaying 16 miles, and constructing some 20 bridges and more than 100 culverts.

A special detailed report of the Sudbury to Soo Road to date is also given.

The following is a general statement of the whole works together with a summary of the expenditure on each:—

North Division.

Allan Tenth Concession Road.—This work is situated on con. 10, lot 4, and consisted in cutting the road wider, removing stumps and logs, digging two ditches, putting in culverts and grading and gravelling some 115 rods.

Assiginac Township By-law.—Repairs were done on some 8 miles of road throughout the township, consisting generally of gravelling and grading.

Atwood By-law.—Two hundred rods of a tap train, 4 feet wide and 2 feet deep. Work was done under the Municipality, the Government contributing one-half of the expenditure.

Alberton By-law.—In the Township of Alberton, 6 miles of repairs were made, consisting of grading and gravelling, digging a tap drain 80 rods long, 4 feet wide at top and 2 feet deep, and 8 culverts put in at various places.

Atikokan and Mill Road.—On the Atikokan and Mill Road, a bridge 275 feet long was built, and some slight repairs made to the road.

Aweres Road.—This road was extended 1 mile this year, chopping, logging, stumping, grubbing and removing boulders; 243 cubic yards of gravel was also distributed over portions of the road.

Balfour Township Roads and Bridge.—From lots 7 to 10 between cons. 3 and 4 a new road was cut out, stumped and brushed and some grading done. On side road between lots 10 and 12 from cons. 5 to 4 the road was cut out, brushed and stumped and partly graded, 3½ miles of new work.

Broder and Dill Road.—Repairs were made on the Long Lake Road, lot 10, con. 5, and side line cons 5 and 6 and lot 5, also on Kelly Lake Road from cons. 5 to 6 in Broder township, and between lots 10 and 12, a distance of 5 miles altogether. One and one-quarter miles of road were also repaired in McKim township to accommodate the settlers of Dill.

Burpee and Mills Township Roads.—On Gore Bay and Mills Road in the Township of Mills between cons. 4 and 6, 200 rods of gravelling was done and on the 4th con. in front of lot 7, 7 rods was filled in with stone 1 foot deep and 40 rods gravelled. On lots 35 and 36 150 rods were graded and gravelled, and on con. 3, 175 rods of the road was widened and 2 large culverts put in. This is reported as being done very satisfactory.

Bidwell Township Roads.—On lot 9, con. 5 and ending at lot 10, the road was filled in with stone from 6 inches to 2 feet deep, 110 rods gravelled, and some small culverts put in.

Billings Township By-law.—In the Township of Billings some 5 miles of work was done under the Municipality, the work consisted principally of grading and gravelling; the Government contributing one-half the expenditure.

Blue, Pratt and McCrossen Road.—On sections 34 and 35, across lots 5 and 6, 400 rods of clearing, cutting and stumping was done; 68 rods of a tap drain 3 feet wide and 18 inches deep; also a single ditch 550 rods long, 5 feet deep. Forty-two rods of 12-foot corduroy was put down, and 5 culverts 4 feet wide put in, making a good, travellable road.

Blake, Pearson and Scoble Township Road.—This work is situated principally in the Township of Scoble, commencing at lot 8, concession 2, and ending at lot 6, concession 2. It consisted of cutting out a right of way 50 feet wide, stumping and grading 24 feet wide, ditching and erecting culverts. About 2 miles of work done on this road, and is reported as very satisfactory.

Batchawana Road.—Five miles of work was done on this road, principally grading, 356 cubic yards of gravel was distributed, 7 new wooden culverts were put in, and 1,550 yards of ditching. This now makes a good, passable road, and no more additional improvements need be made until after the Batchawana, Chippewa and Carpe Rivers have been bridged.

Birch Lake Road.—Some 4½ miles of grading and gravelling was done on this road commencing at lot 1, concession 5, and ending at lot 12, concession 6, May township, making a good, travellable road.

Barr River and Sylvan Valley Road.—In the Township of McDonald, section 34, the work consisted of cutting, grubbing and removing boulders, commencing at the north-west corner of section 34, running east half a mile, thence south a quarter of a mile, thence east a half mile; making a total of one and a quarter miles, cut out 66 feet wide and cleared 30 feet in the centre, leaving the road ready for grading.

Bruce Mines Road, Conditional.—The work was commenced west of the Town of Bruce Mines, on what is known as the Mill Road. Grading and gravelling was done for a distance of half a mile; two large holes, one 30 feet long and 14 feet wide, the other 80 feet long and 14 feet wide, filled in with stone. On the Military Road 160 yards of gravel was distributed. On the Bruce Mines North Road about a quarter of a mile of ditching was done and some 240 yards of gravel spread. This work was all done under the Municipality of Bruce Mines; the Government contributing one-half of the expenditure.

Bridgeland Road.—One and a half miles of road were cut 66 feet wide and grubbed 24 feet in the centre; and when completed will lead through Dunn's

Valley, and will accommodate a large number of farmers with a road to the market.

Broken Front, Salter Road.—Commencing at the north-east side of Broken Front, Salter township, through lots 4, 5 and 6, the road was cleared and graded for one mile and 3 culverts put in. This road follows the Spanish River from Massey to Walford.

Bright and Bright Additional Townline Road.—From lot 1, concession 5, and ending at lot 1, concession 6. The work consisted of cutting down hills, putting in 3 culverts and grading three-eighths of a mile.

Brandon Road.—This work is situated in the Township of Lefroy, and consisted of taking out stumps and stones, cutting brush and grading and gravelling three-quarters of a mile. This road is now in first-class condition.

Cockburn Island and Meldrum Bay Road.—On Meldrum Bay in the Township of Dawson, lot 30, concessions 9 and 10, and lot 33, concessions 9 and 10, the work consisted of removing boulders, grading and gravelling the road and putting in one large culvert. On 15, side road, between concessions 6 and 8 on Cockburn Island, 125 rods of grading was done, and between lots 25 and 30, concession 12, grading and gravelling was done for a distance of 140 rods.

Campbell Township Roads.—On Long Bay Road in the Township of Campbell, lots 21 and 24, concession 2, brushing and grading was done for 250 rods and gravelling 240 rods. On Long Bay and Brittainville Road, on 25 side road, concession 4, and between concessions 4 and 6, about 1 mile of brushing, gravelling and general repairs were done. On 20 side road, between concessions 10 and 12, one and a quarter miles were graded and gravelled and 2 large culverts erected. On lot 22, concession 10, about 20 rods of old crosslaying was removed, and a new bridge 14 feet long was erected and 120 rods of the road graded and gravelled.

Creighton Road.—Brushing, stumping and grading was done on lot 4 and ending at lot 6, concession 6, making 1½ miles of new work.

Capreol Township Road.—Between concessions 1 and 2, lot 5, and ending at lot 8, grading and crosslaying was done and on lot 5, concessions 2 and 3, ending at lot 8 and from lots 5 and 9, between concessions 2 and 4; and on the old road between lots 5 and 8, concessions 1 and 2, grading and gravelling was done, making a total distance of about 3 miles of repairs.

Cockburn Island By-law.—Under this Municipality, concessions 11 and 12, lots 19, 21, 23 and 26 and on lot 20 east to the lake, three-quarters of a mile of general repairs were made; the Government contributing one-half of the expenditure.

Conmee Township Roads.—Commencing at lot A, concession 1, and ending at concession 3, the road was cut out 50 feet wide and cleared 24 feet in the centre; a side hill was cut down and some 16 culverts built. This work is reported as very satisfactory.

Chapple Municipality By-law.—Under this Municipality very beneficial work was done all over the township, and consisted of the following:—Grading 4½ miles, ditching 1¼ miles, 2½ miles of a tap drain 4 feet wide on top and 2 feet deep, ¾ mile of corduroying, 1½ miles of clearing and stumping, 33 culverts put in, 1¼ miles of gravelling and 4,800 feet of 3-inch tamarack plank on bridges. This work is considered very satisfactory: the Government paying one-half of this expenditure.

Cook's Road.—This road is in the Township of Johnston, and consisted of grading ½ mile on concession 4, lot 1, and ending at concession 5, lot 2. Several good stone culverts were also put in.

Crab Lake Road.—This work is in the Township of Shedden, and is from lot 3, section 23, ending at lot 4. Fifty feet of a right of way was cut out and the central 18 feet grubbed 1 mile long. One 20-foot bridge was built, and 80 rods of a ditch dug out, and several culverts put in.

Dinorwic to Vermilion Bay Road.—In Sanfield Township, lot 4, concession 2, ending at lot 9, general repairs were made, the grader being used for half the distance. Several large hills were cut down, a large number of culverts built, and the approaches to the new bridge near Oxdrift were filled in, putting the road in good shape for 17 miles from Eagle River to Dryden. From Dinorwic to Eagle River Road general repairs and improvements were made, removing old crosslaying, blasting stumps, cutting down several hills, and putting in a small bridge at C. P. R. crossing. In Zealand township, commencing at lot 16, concession 5, and ending at lot 26, concession 6, general repairs were made to the road, some small hills were cut down, several culverts were built, a large quantity of gravel was distributed over the road, and 3 small bridges erected. This work was very satisfactory.

Dinorwic Road North.—One-quarter mile of new road was cut out, and general repairs made over 9 miles of the road.

Dilke Township By-law.—Two and one-third miles of grading was done and three-eighths of a mile of ditching—4 feet at top, 1½ feet deep, 70 rods of corduroy 9 feet long, making about 3 miles of road put in good shape. The work was done under the Municipality; one-half of the expenditure being paid by the Government.

Day Mills and Dayton Road.—This road is in the Township of Bright Additional, and 2 miles of grading and gravelling was done and general repairing from lots 3 and 4, concession 1, ending at lot 2, concession 1.

Dorion Township Road.—Commencing at lots 8 and 9, concession 3, stumping grading and ditching, and at south side of Coldwater Bridge, on hill between lots 9 and 10, the road was widened, stumped and graded for half a mile, and at north-east corner of lot 8, running south across lot 8, between concessions 3 and 4, 37 chains were graded and ditched and the corduroy covered with earth and gravel.

Deviation of North Road.—Commencing at lot 3, concession 3, in Aberdeen, half a mile was graded and a ravine 4 rods long and 8 feet deep filled in with logs and stone, making this road ready for traffic.

Day Mills and Iron Bridge Road.—Four miles of general repairs were made, commencing at lot 7, concession 1, ending at lot 12, concession 2, in the Township of Gladstone. The work consisted of grading, gravelling and removing boulders from the road.

Desbarats' Road.—This road is in the Township of Johnston and consisted in widening the road to a width of 66 feet between lots 15 and 16, and between lots 28, 30, 35 and 36, grubbing out the central 20 feet. Two and seven-eighths miles of work was done.

Dayton and Dean Lake Road.—In Thompson Township, commencing at section 17 and ending at section 18, a road was cut out 66 feet wide, grubbing and grading the central 20 feet, making 1 mile of good, serviceable road.

Espanola Station Road.—On Espanola Road, from the Station to Mills, in the Township of Merritt; six hundred rods of grading was done and 5 rods of a ditch put in to drain the road; also, on road running east of railway track, 160 rods of grading was done and some small culverts put in.

Eton Township Roads.—From lot 6, concession 4, to lot 8, concession 4, the road was cut out for half a mile and the same graded. Two small bridges were erected, 5 small culverts put in, and the corduroy covered with gravel.

Emo Municipality By-law.—This work was done under the Municipality, and 6½ miles of grading was done and the tap drain cleared out for 1¼ miles; two-thirds of a mile was corduroyed, 8 culverts put in and several bridges planked with tamarack. The work is reported as very satisfactory; the Government contributing one-half the expenditure.

Fairbank Road.—One mile of grading was done from lot 3, concession 6, to lot 5, concession 6.

Foley Mine Road.—This work consisted of repairing, clearing out and stumping, and ditching in the low places; covering a distance of 3 miles.

Green Bay and Honora Road.—This work was in the Township of Bidwell, commencing at lot 25 and ending at lot 27. The work consisted of filling in with stone a large hole about 16 rods long and from 6 inches to 2 feet deep; putting in one culvert, and grading and gravelling 190 rods.

Gold Rock Portage Road.—The work consisted this year of completing the work done in 1909, grading and gravelling the road, putting in 2 small bridges; and covering with gravel the corduroy which was covered last year with clay; cutting down some rocky hills, and a general improvement made on the road from Beaudreau's Landing to Gold Rock.

Gore Bay to Barrie Island Road.—This road runs through the Township of Gordon, and 1½ miles were graded from lot 21, concession 8, to lot 26, concession 8. Two 4-foot cedar culverts 16 feet long were also put in.

Gordon Municipality By-law.—General repairs and improvements were made on roads throughout the township by the Municipality; one-half of the expenditure being paid by the Government.

Goulais Bay and Kirby Mills Roads.—Improvements were made on this road for half a mile, cutting, stumping, grading, ditching and gravelling. One steep hill was reduced to an easy grade, and 250 cubic yards of gravel distributed.

Goulais Bay Government Road.—General repairs were made on this road for 2½ miles, 8 new culverts were put in with stone sides, and 231 cubic yards of gravel distributed where needed.

Gorham and McIntyre Boundary Road.—In the Township of Gorham from lot 10 to lot 12, the road was cut out 40 feet wide, stumping and clearing the central 18 feet, and grading 35 chains. A large hill was cut down and 4 culverts with mud sills and stringers covered with round timber erected. This is the main road to the school house. Between lots 21 and 22 the road was cut out 40 feet wide, and ditched on both sides for a distance of 110 chains; 23 chains across a swamp was corduroyed and 3 culverts built of tamarack and cedar put in.

Grassett, Concession One, Road.—The work consisted of clearing the timber and brush on the roadway to a width of 66 feet, bridging a creek 14 feet wide, cutting ditch to change creek bed, building bridge over Beaver Creek 20 feet wide, and grading the road north for half a mile.

Galbraith and Aberdeen Townline.—At lot 12, concession 3, two hills were cut down, a ravine 150 feet wide at the top, 70 feet at the bottom and 12 feet deep was filled in.

Gordon Lake and Bruce Mines Road.—This work in the Township of Johnston, lot 4, concession 6, ending at lot 5, concession 6, Hink's Location, consisted of gravelling, ditching and removing boulders from the road a distance of 1½ miles; also cutting out a new piece of road around a hill, and grading same one-quarter of a mile, filling in creek and cutting a ditch to change the run of water; and building 1 small bridge.

Gordon Lake Road.—This work was on Gordon Lake and Old Soo Road, commencing at lot 4, concession 6, ending at lot 5, concession 6, cutting and clearing one-quarter mile on lot 5 and grading side hill; also grading across lot 4 and putting in 2 culverts.

Gladstone Road.—The work consisted of taking out a large quantity of stumps, building 2 small bridges, filling in 5 rods of swamp and putting in 2 small culverts. The work is situated at lots 3 and 4, concessions 5 and 6.

Gillies Township Road.—Commencing at Silver Mountain Road, and running north between lots 10 and 11 across concessions 4 and 8, the road was cut out 40 feet wide, stumping and clearing the central 18 feet, grading 15 chains, cutting down a side hill 35 chains; and on the north side of lot 4, running east across lots 3 and 4 to lot 2, the road was cut out 50 feet wide, stumping the central 24 feet and grading 95 chains.

Hagar Township Roads.—Five miles of general improvements were made in Hagar township, consisting of brushing, stumping, grading and ditching on concession 6 through lots 4 and 10, concession 4, lots 10, 11 and 12, concession 3. Good, serviceable work done.

Hanmer Township Road.—Between lots 6 and 7, concession 4, brushing and grading was done on the side line for a distance of 1 mile.

Honora and Little Current Road.—On concession 9 in Howland township a large mud hole was filled in with stone 2 rods long and one foot deep; and 100 rods of the road gravelled. On concession 7 in Howland one-quarter mile of repairs was made, grading and gravelling the road.

Howland Township Roads.—Commencing at lot 10, concession 4, ending at lot 15, concession 4, the road was graded and gravelled, and 2 small culverts put in. On Sheguiandah and Bidwell Road 200 rods of the road was gravelled, 1 culvert erected; making a travellable highway.

Haviland Road.—Through section 37 the work consisted of cutting down hill, raising an 18 foot span bridge 4 feet, filling in approaches to the level of the bridge, and repairing the road for theree-eighths of a mile.

Hilton Township By-law.—This work was done under the Municipality and consisted of generally improving the roads throughout the township. On concession 13, lots 16 and 24, half a mile of road gravelled and 2 hills cut down. On lots 5 and 6, concession 11, three-quarters of a mile of ditching and gravelling; lot 15, concession P, a hill was cut down for a distance of 50 rods; lots 1 to 5, concession 12, a mile of ditching and crosslaying was done; lots 12 and 13, concession W, ditching and gravelling for half a mile. On lots 21 and 23 the road was cut out for half a mile and between lots 7 and 8, concession W, one-quarter mile was cut out and brushed, representing about 8 miles altogether of excellent work. The Government paid one-half of the expenditure.

Harrow Township Road.—This work is on lots 1 and 2, concession 6, and lots 3 and 4, concession 2. One mile of road was cut out, cleared, stumped and graded and on lot 9, concession 5, heavy ditching was done on both sides of the road for half a mile, and one-quarter of a mile gravelled.

Henderson Road.—This road runs through the Township of Aberdeen, lot 4, concession 1. Seven-eighths of a mile was cut out 66 feet wide, grubbed and graded, making a first class roadway.

Iron Bridge and Dean Lake Road.—This road is in the Township of Bright, and general repairs were made, starting at lot 1, concession 6, angling south-west across lot 1, concession 1, lot 2, concession 2, in Gladstone; thence west across the end of lot 2, to the Mississaga River, a distance of $2\frac{1}{2}$ miles. A new piece of

road was cut out, grubbed, brushed and logged for a distance of half a mile, and a ditch 1¼ miles was made through a marsh to take water off the road.

Jocelyn Township By-law.—General repairs were made on Huron Line, concession K, for half a mile, and 150 rods of work done cutting down hill and levelling up in front of 5 and 6, concession R. The Government paid half of this expenditure.

Johnston, Tarbutt and Tarbutt Additional By-law.—General repairs were made on roads as follows:—Between blocks M and L Survey and across lots 16 and 17, half a mile was graded and gravelled. Tarbutt, concession 1, lots 4, 3 and 2, and lot 1, concession 6, 1¼ miles graded and gravelled. Between blocks 4 and K, and between N and O, and between lots 7 and 8, 175 rods were graded and gravelled, and in front of lot 5 Desbarats, and on lot 1, concession 1 in Tarbutt, and lot 2 in Johnston, repairs were done representing 1½ miles.

Jaffray and Mellick Road.—On lot 11, concession 7, grading and ditching and blasting out stumps, 200 yards of crosslaying covered with gravel and several large hills cut down, on what is known as East Mellick and Sturgeon Lake Road, in Jaffray. The roadway was cut out and brushed and the stumps removed from lot 12, concession 7, to lot 5, concession 1, connecting the road with the bridge across Black Sturgeon Lake; and on lot 5, concession 5, in Mellick, general repairs consisting of corduroying, covering the same with gravel, removing several large stumps and boulders and cutting down hills; representing some 2½ miles of work done.

Kagawong and Gore Bay.—This work is in the Township of Allan, commencing at lot 5, concession 9, and ending at lot 11. The work consisted of grading 1 mile, filling in 40 rods with stone, putting in 1 culvert 4 feet wide, and gravelling 425 rods; making an excellent road.

Killarney to Collin's Inlet Road.—In Killarney and Carlisle repairing was done on some 10 miles of road, 2 bridges were built, one 30 feet and the other 36 feet long, over Indian Creek.

Kingsford and Carpenter Townline.—On lot 5, concession 5, a double ditch was made 4 feet wide at top and 18 inches deep, 250 rods long; also a tap drain put in, 4 feet wide and 2 feet deep, 25 rods long. Eight culverts were also put in, and the road continued for 160 rods, chopping, stumping and logging same. This was very satisfactory work.

Kirby Mills and Bellevue Road.—This work starts on the south-east quarter of section 37, and runs through the north half of the same, crossing the south-west quarter of section 36, thence westerly across the south-east quarter of section 35. Two miles of road was chopped, stumped, logged and grubbed, three-quarters of a mile of road ditched on both sides; a bridge was built over a narrow ravine and 4 hills cut down, reducing the road to an even grade, 108 cubic yards of gravel distributed, and the work considered well done.

Kingsford and Fleming Road.—This work is situated in the Township of Kingsford, beginning at lots 10 and 11, concessions 3 and 4, and ending at concession 5, and consisted of the following work:—135 rods of a tap drain, 4 feet wide 2½ feet deep, 50 rods of a single ditch 3 feet by 1½ feet; 165 rods of a double ditch 3 feet wide by 2 feet deep; 7 culverts 4 feet wide, and 125 rods of corduroy. This completes the work to the south side of concession 5.

Lorne Township Roads.—One and a half miles of grading, gravelling and general repairs were made, commencing on the east side of Nairn Centre.

Louise Township Road.—On lot 6, concession 6, ending at lot 6, concession 5, the road was graded and grubbed, and on side line, concession 5, between lots 5

and 6, and known as the Lindalla Settlement Road, 1½ miles of work was done, consisting of brushing, stumping and repairing.

Lavallee Township By-law.—Under the Municipality general improvements and repairs were made, consisting of the following work:—A tap drain 239 rods long 3½ feet wide and 2 feet deep; 187 rods of crosslaying 10 feet long; 2½ miles of road graded and gravelled, and 1¼ miles of road ditched from a half to 2 feet deep, with a good slope; 2¾ miles of road cleared 45 feet wide, 15 culverts put in and one 40-foot bridge erected. This was very satisfactory work, and done under the Municipality of Lavallee; the Government paying one-half of the expenditure.

Lumsden Township Road.—In the Township of Lumsden, between lots 6 and 7, general repairs were done for 1 mile, consisting of ditching, grading and gravelling.

Lyle Road.—The work is situated principally in Van Horne township, and consisted of grading and repairing road along lot 1, concession 4, and between lots 6 and 7, concession 4, and along lot 12. One and a half miles of new road was cut out, and an 85-foot bridge raised 1½ feet and re-covered. A bridge was also built over Moose Creek. This work is reported as very well done.

LePage Road.—This is in Zealand township, and consisted principally of grading, ditching and putting in culverts. The road is now complete to LePage's Mill, and is in first-class condition for over a mile.

Lee Valley Road.—On lot 6, concession 4, ending at lot 9, 1 mile of road was graded and 3 heavy hills cut down.

Lefroy Boundary Road.—In the Township of Lefroy, across section 7, and running south from section 7, thence east, the road was cut out 66 feet wide, grubbed 40 feet in the centre and the whole distance graded; representing about 1½ miles of work.

Leeburn Road.—This is in Aberdeen township, lot 5, concession 2, and consisted of cutting down side hill for 80 rods, making a good road up a steep hill, several hundred feet high.

Lybster Township Road.—Commencing at lot 3, concession 5, ending at lot 1, concession 5, the road was cut out 40 feet wide, 125 chains of stumping done, and the road cleared 18 feet in the centre; side hill cut down for 19 chains, 9 culverts were put in, and some ditching done. The road was generally cleared out and well drained.

Lavalee, Burris and Dantz Road.—On lots 4 and 5, concession 5, 260 rods of the road was cleared out 4 rods wide, 320 rods of grading was done; 60 rods of a tap drain 4 feet wide and 2 feet deep, and 3 culverts 4 feet wide and 15 feet long.

Meldrum Bay to Gore Bay Road.—This road is situated in the Township of Burpee, concession 7, between 1 and 10 side road. The work consisted of filling in some mud holes with stone, brushing out the sides for a mile and a quarter, gravelling 500 rods, and putting in one bridge, built of cedar timber 16 feet long and 12 feet wide. Work was done also in the Township of Robinson, concessions 5 and 6, between 1 and 5 side road, 1 mile was graded; 100 yards of gravelling put on. Work was also done on this road in the Township of Dawson, on lot 10, putting in 6 small culverts 2 feet deep by 5 feet wide, and gravelling about 1 mile of road. This now makes a good travellable highway.

Michael's Bay and Providence Bay Road.—In the Township of Carnarvon, commencing three-quarters of a mile east of Providence Bay, general repairs were made for 4½ miles, and 300 rods of gravel put on.

Manitowaning and Lake Manitou Road.—Commencing west of the town limit in the Township of Assiginac, 1 mile of grading was done, 1 large culvert put in, 500 rods of gravel distributed; making an excellent road.

Mutrie Township Road.—In the Township of Mutrie, lot 8, concession 4, ¼ of a mile of a ditch was dug, 1 hill cut down, corduroy covered with clay, and a mile of new road cut out as far as Vermilion and Eagle River Road.

Manitowaning and Ingram's Hill Road.—This is in the Township of Assiginac, lots 34 and 36, and consisted of removing stones, grading the road, and putting on 225 rods of gravel. This road is now in first-class shape.

Morgan Township Road.—From concession 5, Balfour, to concession 1, in Morgan, and across lots 4 and 5, three miles of clearing, stumping, ditching and grading was done and two bridges built. This road gives an outlet to the settlers in Morgan township.

Morley and Pattullo Municipality By-law.—This work was done under the supervision of the Municipality. Seven miles of grading done, 2 1-3 miles of gravelling, 2 1-3 miles of ditching, ½ mile of corduroy 9 feet long; a new road cut and cleared for 2 2-3 miles, 3 rods wide, 15 culverts were put in, and general repairs made on several roads; representing in all about 14 miles of work. One-half of the total expenditure was paid for by the Government.

Markstay and Warren Road.—In the Township of Hagar, concession 4 and across lots 1, 2 and 3, 1½ miles of grading was done.

Miscampbell Roads.—On lots 8 and 9, concession 1, 60 rods of a ditch put in, 20 rods of a tap drain, and 1 large culvert. Lots 8 and 9, concession 2, the road was grubbed 22 rods, 26 feet wide, 22 rods ditched, and 1 culvert put in. Between lots 8 and 9, concession 3, ½ mile of road was cut out, 4 rods wide, and the central 24 feet grubbed and cleared and 20 rods ditched.

Mather, Richardson and Potts Townline.—This work is along lot 1 in Richardson, 11 and 12 in Potts, and 12 and 11 in Mather, and consisted of the following:—130 rods of a tap drain 3 feet top, 1¼ feet deep; 50 rods of a tap drain 4 feet top, 1½ feet deep; 154 rods of a double ditch 3 feet wide, 1 foot deep; one bridge 30 feet long, 16 feet wide, and one 40 feet long, 16 feet wide; 4 culverts 4 feet wide and 16 feet long, and ¾ of a mile of brushing and stumping.

Michipicoton Mining Roads.—General repairs and improvements were made on these roads as follows:—2 miles of grading and gravelling on Falls Road, 2½ miles on the Golden Reed Road, and some repairs made to the Wawa Road. The work on Falls Road consisted of spreading 469 yards of gravel, blasting out rock, putting in four wooden culverts, 1,210 yards of gravel was distributed on the Golden Reed Road and 12 cubic yards of rock blasted out; two wooden culverts were put in on the Wawa Road and two new stringers put on the bridge and a heavy sand hill cut down; representing some five miles of good, serviceable work.

Maitland Road.—In the Township of Aberdeen, lot 4, concession 2, ending at lot 5, concession 2, the road was cut out 35 feet wide on concession 2 for half a mile, thence north half a mile, and a large quantity of stone removed, and 40 rods of the road graded.

Marsh River and Montgomery Road.—In the Township of Montgomery, lot 12, concession 1, a bridge was built across Marsh River, 4 bents, 4 spiles in each bent, centre span 25 feet clear, and end spans 12 feet, caps and stringers of cedar timber, and part of the covering put on at a cost of $300.

May Concession Three and Four Road.—On lot 10, concession 4, ending at lot 12, concession 4, the road was cleared for half a mile and graded; 4 bridges

built, one 20-foot span, one 21-foot span and two 22-foot spans; these bridges were all built of cedar timber, making extra good work for the expenditure made, namely $300.

Marks Township Road.—On side road running across lots 3 and 4 the road was cut out 40 feet wide, stumped and cleared in the central 24 feet, 40 chains graded, 2 large hills cut down, removing 800 yards of earth and putting the same into a swamp, and 10 chains corduroyed. Starting at the east end of lot 3 and running west between concessions 3 and 4, the road was cut out 40 feet wide, and the central 20 feet stumped for a distance of 80 chains; 5 large culverts were also put in.

McDonald, Meredith and Aberdeen Municipality By-law.—Under the supervision of the Municipality, general improvements and repairs were made on the following roads:—Croker Road across sections 34 and 27, one mile; sections 29 and 19 in McDonald, one mile gravelled; sections 20, 22 and 24 in McDonald, one mile graded and gravelled. Quarter mile of ditching was done on section 30 in the Township of Meredith. On concession 2, lot 3, in Aberdeen, the road was graded for three-quarters of a mile, and half a mile on the north half of lot 5 in concession 1, Meredith; and on sections 30 and 29 the road was graded and gravelled for about two miles; representing in all about six miles of work. The Government paying one-half the expenditure.

McKinnon Township Road.—Commencing at lot 8, concession 5, ending at lot 11, concession 6, 1¼ miles of the road was cut out 60 ft. wide, and the central 30 ft. grubbed and graded.

Nairn Township Road.—On the road running south to Lake Wabgessia, general repairs were made consisting of cutting the brush from the side, laying about 10 rods of crosslay, filling in some holes with stone and gravelling 110 rods: also on the road to McLean's Farm, grading was done for about 200 rods, 23 rods of crosslaying put in, and the road gravelled for 110 rods, making a first class job for the expenditure.

Neebing Municipality By-laws.—Under By-law No. 280 of this Municipality commencing at concession 1, and ending at concession 4, in the Township of Blake, some three miles of general repair were made. Under By-law No. 281, commencing at the Blake and Scoble Townline; running south between concessions 1 and 2, one mile brushed out 20 ft. wide, and across lots 9, 10 and 11, the new road was rebrushed and graded for two miles. And under By-law No. 282 of the same Municipality, work was done on the Townline of Neebing and Paipoonge, commencing half way across concession 1, Neebing, and ending at concession 4, half a mile was cut and stumped and part of it graded. This is a new road north of the river. The total expenditure under this Municipality was in the neighborhood of $5,000; the Government contributing one-half.

Nelles Township Road.—General repairs and improvements were made on lots 2 and 3, concession 11, as follows:—240 rods ditched on both sides of the road, 3ft. top and 18 inches deep, 310 rods chopped out, 240 rods of corduroy laid; three-quarters of a mile of this road is now completed.

Old Mine Centre and Glenorchy Road.—This work consisted of 160 rods of ditching, putting in a 20 ft. bridge and repairing the old 40 ft. bridge. Fire in the R. R. District destroyed most of this work.

O'Connor Township Roads.—Between lots 4 and 5, concession 5, running from the south side of concession 5, north 62 chains, the road was cut out 40 ft. wide, and stumped and gravelled 18 ft. wide, making a good road to the School House. Between concessions 6 and 7, 19 chains of ditching and grading was done, and

continued to lot 11, 2 cedar culverts were put in, a good ditch dug out, and the corduroy over swamp well gravelled. On lot 6, between concessions 6 and 7, the road was graded and ditched, and between concessions 5 and 6, lot 7, some grading was done, a ditch 25 chains long and 3 culverts put in.

Pellett Township Road.—This is a very rough piece of work and consisted of removing boulders, putting in culverts and crosslaying. On lot 5, concession 5, the road was graded and ditched, some large hills cut down; several small bridges built. This represents some 11 miles of work, and makes a good passable road up to the new bridge across Winnipeg River at Keewatin.

Plummer Additional Municipality By-law.—Commencing at lot 10, concession 2 and ending at lot 12, concession 1 in the Township of Aberdeen, three miles of the road was graded and 270 yards of gravel spread. From lot 12 concession 6 to lot 8, concession 6, a half mile was cut out 66 ft. wide and across lots 7 and 8 and from west side of lot 12, going east to east side of lot 8, 1¼ miles of clearing, logging and stumping was done, grading three-quarters of a mile. This work is through the Cuthbertson Location, representing some 5 miles of work, the Government paying one-half of the expenditure.

Paipoonge Township By-law.—Under the supervision of this Municipality the following work was done:—Along the Kaministiqui River, running along the line between concession B. and concession 1, to where the Paipoonge and Oliver Townline now crosses, and from concession 1 to concession 5 and on concessions E. and D. on lots 12 and 15, 13 and 25 and 21 and 30, this work represents about 5½ miles of new road cut out, and 22¼ miles of repairs; and is highly satisfactory. The total expenditure amounted to about $4,000; of which the Government paid one-half.

Potts Township Road.—On lots 10 and 11, concession 1, and ending at lot 10, concession 2, general improvements were made as follows:—91 rods of tap drain, 4 ft. wide, and 2 ft. deep, 95 rods of double ditch, 4 ft. wide and 2 ft. deep, 38 rods of double ditch, 3 ft. wide and 1 ft. deep, and 7 culverts 4 ft. wide; brushing, logging, stumping and clearing 1¼ miles 3 rods wide.

Pattullo and Sifton Centre Road.—On concession 6, 520 rods of a ditch 3 ft. wide and 2 ft. deep, and on concession 5, 240 rods of a ditch 3 ft. wide and 2 ft. deep, and 23 rods of a tap drain 5 ft. wide and 18 inches deep, 1 culvert 4 ft. wide. On concessions 2 and 3, 460 rods of a ditch 3 ft. wide and 1 ft. deep, 75 rods of crosslaying 12 ft. long, 1 culvert 4 ft. wide 16 ft. long; completing the road to within 40 rods of the Townline between Sifton and Pattullo.

Patton Township Road.—Lot 8, concession 5, a bridge was built across Alma Creek, 2 cedar abuttments 5 ft. high, filled with stone, 4 tamarack stringers covered with 6-inch cedar. 14 ft. wide; this is a 30 foot span. Also 40 rods of swamp was ditched on both sides and 20 rods graded and gravelled.

Port Lock and Gordon Lake Road.—In the Township of Johnston, lot 5, concession 3, running south across lots 5, concession 2 a distance of nearly two miles, the road was graded and partly gravelled; 2 hills were cut down and on block O, from the bridge to the blacksmith shop, 40 rods were graded and generally repaired.

Plummer Additional Road.—General improvements and repairs were made as follows:—Lots 1, 2, 3 and 4, concession 3, Cuthbertson Survey, half a mile was repaired and gravelled. On blocks A. and B. and south half of lot 3, concession 4, three-quarters of a mile; across lots 3 and 4, concession 5, half a mile; across lot 5, concession 4, and lot 5, concession 5, and lot 4, concession 6, and lot 2 concession 5, one mile. North half of lots 2, 3 and 4, concession 5, three-quarters of a mile

gravelled, across lot 8, concession 5 and 8, half a mile gravelled. South half of lot 4, concession 4, north half of lot 4, concession 5, three-quarters of a mile; and lot 3, concession 3, and lots 6, 7 and 8, concession 4, one mile. All general repairs, consisting principally of grading and gravelling.

Pickerel Creek Road and Bridge.—This work is situated in the Township of Day, lot 3, concession 1. The road was graded for quarter of a mile, and two bridges built, one 25 ft. span, 2 bents, 40 spiles, cedar caps and stringers, covered with 3 inch plank, 14 ft. wide, the approaches filled with stone, covered with clay and gravel; the second bridge was built exactly the same as the above.

Patton and Gladstone Road.—On lot 12, concession 2, Patton, ending lot 1, in Gladstone, the road was cut out and grubbed and partly graded.

Rockville Roads.—On side road, concession 9 between lots 9 and 10, concession 10, a 20 ft. filling was made with stone, 6 inches to 2 ft. deep, 15 rods long and 16 feet wide; 100 rods graded on the Townline of Bidwell and Billings, between concessions 9 and 10, filling in a large hole with stone, 14 rods long from 6 inches to 1½ft. deep, 16 ft. wide; 1 culvert 6 ft. wide, 16 ft. long, and 400 rods graded. This was an excellent job for the money, the expenditure being $400.

Roads South of Espanola.—On Black Creek Road, in the Township of Merritt, concession 3, ending at lot 11, the work consisted of putting in 5 culverts, removing large stones from the centre of the road, ditching along a side hill, grading and gravelling 100 rods.

Richardson Township Road.—Lots 7, concession 1, 180 rods were cleared and stumped, 110 rods graded, 3 rods of a fill on approach to bridge 4 ft. high, 11 ft. top and 48 ft. long; one 4 ft. culvert and one 8 ft. culvert put in; making good serviceable work.

Road through Section 1, Fenwick.—36 rods chopped out to a uniform width of 36 ft. through virgin bush; logs, stumps and stones removed and road graded to 24 ft. At this point the new road joins the old one, for a distance of 29 rods; it has been chopped out to a width of 30 ft.; logs, stumps and boulders removed, nicely graded up and ditched; making the road now passable and fit for traffic.

Road from Batchawana Bay, through Leigh and Kars.—Commencing at Goulais Bay in the Township of Fenwick, where it joins the Goulais Bay Settlement, 5 miles of work was done on this road, chopping, stumping, logging and corduroy, 1 small bridge built and 3 wooden culverts put in. This road is now passable for wagon traffic, except at the swamp in section 10, which will have to be ditched.

Road in Lefroy.—Road starts at the north-east corner of section 16 and runs south 20 rods, thence east on section 15 4 rods; thence south-west to line between sections 15 and 16; thence south on line to south-east corner of section 16; 5 clay hills were cut down, filling between and grading the balance; then cutting out and clearing east 20 rods on section 15 to the main road. This road is now ready for traffic.

Road in Galbraith, Concessions Eight and Nine.—General improvements were made consisting of cutting, grubbing, grading and ditching. The work commenced at the south-east of lots 8 and 9, running north side of lots 8 and 9, a distance of half a mile, cutting out 66 ft. wide, and grubbing the central 30 ft.; and 3 wooden culverts put in. This is a very necessary road, and connects with the McPhee Valley.

Road and Bridge in Aberdeen.—In the Township of Aberdeen, concession 2, lot 7, the work consisted of building a bridge across Thessalon River; 6 bents, 4 spiles on each bent, caps 10 inches, flat on two sides, 4 heavy stringers, each bent braced with foot and sway braces, main length from east to west, bent 104 ft.

covered with 3 inch 14 ft. hemlock plank; east approach 15 ft. covered with hewn cedar 6 inches; and west approach 18 ft. covered with the same; the total length of bridge, 187 ft., and 13 ft. above the present water mark.

Sheguiandah and Little Current Road.—One mile of gravelling and grading was done, 4 culverts 16 ft. long, and large boulders removed from the road.

Sanford and Aubrey Road.—On concession 5 the right of way was cut out, stumped and graded, several culverts put in, crosslaying covered with clay and gravel and a number of small bridges built putting this road in good condition. On lot 10, concession 1, ending at south half of concession 1, a right of way was cut out, grubbed and stumped, 3 small hills were cut down, a number of culverts put in; the road well ditched and worked over with the road grader.

Spruce Lake Road.—Between 465 P, and ending 200 P, several small hills were cut down, a lot of brushing and stumping done; boulders removed from the road and generally repaired for a distance of over 2 miles.

Silver Bay and Sandfield Mills Road.—In the Township of Sandfield, just east of Silver Bay, the work consisted of under-brushing the sides, taking out the stones, laying 5 rods of crosslay, covering the same with dirt and gravel, grading and gravelling the road for 350 rods.

Sandfield Township Roads.—Beginning at lot 64, concession 6 and ending at lot 15, concession 6, the work consisted of grading and gravelling, some 420 rods of work being done; and on the blind line between concessions 7 and 8 and ending at lots 20 and 21, 150 rods chopped and logged; and in front of lots 16 and 18 the road was graded and gravelled for 150 rods; and on lots 27 and 28 a large filling was made 10 rods long, 1 foot deep and 16 ft. wide filled with stone. These roads are now all in good, serviceable condition.

Slash Township Roads.—In the Township of Tehkummah, concession 8, east of 10 side road, the work consisted of stoning the side, grading 200 rods, and putting in one small culvert 16 ft. long and 4 ft. wide of cedar timber.

St. Joseph Municipality By-law.—General repairs were made in St. Joseph as follows:—West side of lot 10, east to lot 5, one mile south on 5 side line to concession G, lot 5, 1¼ miles across lots 13, 14 and 15, concession V, three-quarters of a mile: across lots 29 and 30, half mile ditched; representing 3½ miles of work, the Government contributing one-half the expenditure.

Shuniah Municipality By-law.—Very considerable and satisfactory work was done under this Municipality this year at an expenditure of $6,000, the Government paying one-half, the work was as follows:—3½ miles of new road cut out east side of lot 17, concession B, ending lot 14, concession 11, in McGregor township; 8 miles repairs made on the Black Bay Road, running from Port Arthur and along the line of the C. P. R. and Lake Shore: repairs also made on the Dawson Road, lots 22 and 19, and on Oliver Road, lot A, to Oliver and McIntyre Townline. Between 47 and 66, and between 46 and 57, 2¼ miles of repairs made, and 1½ miles of new road cut out, starting at east side, location M, and ending west side of location I; 4½ miles of repairs made on the west side of lot 21 to lot 26, White Survey, and along the west side of lot 26, thence along south side of lot 27 and south to Oliver Road; also a mile of repairs on the south side of 47 and north on the line between 47 and 44; 1½ miles of new road also cut out, starting at the Townline of Oliver and McIntyre, section 27, and running east, and on section 19 centre line running north between sections 4 and 19 and 5 and 18, and ending at section 6 on the north, and 17 on the south. 1½ miles new road cut out and two miles of repairs made; representing in all 8 miles of new work and 20 miles of repairs. This work is highly praised by the community in general.

Schreiber Road.—This work consisted of cutting out the road 40 ft. wide, stumping, grading and repairing 64 chains, erecting 2 large culverts, cutting down 4 hills, removing 700 yards of earth and filling in a ravine. The road runs from Schreiber to the shores of Lake Superior. There are some 45 chains yet to be graded and stumped.

Striker Road.—A mile of road was cut out 45 ft. wide, and the central 20 ft. grubbed and ¾ of a mile graded. A bridge was put in 10 ft. long and the approaches filled in. This is a continuation of the road from concessions 3 and 4, lots 9 and 10.

Sowerby and Kirkwood Road.—In the Township of Kirkwood lot 9, con. 4, ending at lot 11, con. 4, the work consisted of cutting down hills, filling and grading. Good work was done for this expenditure.

Shedden and Victoria Road.—On section 18 Victoria, and lot 3, con. 4, Shedden, the road was cut out and logged 60 ft. wide for a distance of 2 miles and partly graded.

Salter Township Road.—Lot 8 Broken Front ending at section 34 one-half mile cleared, stumped and graded, and between lots 8 and 9 and sections 33 and 34, the road was graded for 1 mile and 6 culverts put in.

Strange Township Roads.—Commencing at lot 2, con. 2, and ending at lot 6, con. 2, a roadway was cut 40 ft. wide, stumping and clearing the central 24 ft.; corduroying 15 chains, erecting two large and two small culverts; and on side line between lots 2 and 3, running north to White Fish River, the road was generally repaired; also across the Creek between lots 2 and 3, con. 2, a bridge was repaired, as well as the bridge across White Fish River between lots 2 and 3, con. 4.

Thessalon Municipality By-law.—General repairs were made on the North Road, section 29, and on the East Road, section 34, running east, and on the boundary road between Kirkwood and Thessalon, representing about 5 miles of work: the Government contributing one-half of the expenditure.

Townline Campbell and Carnarvon.—Grading and stoning done on this road for 350 rods, gravelling 325 rods. The road is on the Townline between cons. 10 and 12.

Thessalon and Lefroy Road.—The road was cut 66 ft. wide, stumping the central 30 ft., levelling with stone and gravel ¾ of a mile, grading ½ mile. This road follows the Lake Shore to the Hope Lumber Co.'s Mills.

Tarbutt Road, Cons. 5 and 6.—Commencing at lot 1, cons. 5 and 6, and ending at lot 3, cons. 5 and 6, the road was stumped and cleared 60 ft. wide, graded for 320 rods, 305 rods of ditching done, 6 tap drains put in; amounting in all to 70 rods; two 8-inch tile culverts and two 12-inch wood culverts, also one stone culvert put in.

Vermilion Road.—In the Township of Fairbank, lot 1, con. 5, ending at lot 3, con. 5—1½ miles of repairs were made, consisting of grading, ditching and gravelling.

Vankoughnet Side Road.—On side road from Goulais Settlement, a heavy red clay hill was considerably reduced and gravelled from top to bottom; the length of the hill was 24 rods.

Van Horne Township Roads.—The road was graded and repaired for 3 miles.

Waters Township Road.—In the Township of Waters general repairs were made, consisting of grading, stumping and gravelling on several of the roads.

Wabigoon Road North.—Con. 2, lot 3, the road was graded and ditched, several hills cut down, some new culverts put in, and a 25 ft. span bridge built across Nugget Creek.

Wainwright Township Roads.—On lot 7, con. 5, in Wainwright, the road was completed; this was a great help to the settlers who had no outlet previously.

West Bay and Honora Road.—On the Townline between Bidwell and Howland, lots 35 and 36, the road was generally repaired, graded and gravelled for 150 rods and a new culvert put in; and on concession 1, east of the Townline, a large mud hole filled with stone 4 rods long from 1 to 2 ft. deep, and gravelled for 150 rods; making a very good job.

Worthington and Blue Municipality By-law.—Under the Municipality 1½ miles of road cleared and gravelled, 3½ miles of grading done, 1½ mile tap drain, and 6 culverts 4 to 8 ft. wide. This work is very satisfactory. One-half the expenditure was paid by the Government.

Wilson's Road, in Prince.—The blind line on section 28 running East and West was extended half a mile, chopped out 20 ft. wide, all obstructions removed, and the road levelled off.

Wells Township Road.—On lot 2, concession 5, ending at lot 8, concession 3, rock was blasted out, hills cut down and graded, and a large amount of gravel put on; some 4½ miles altogether were repaired.

White Pennel Road.—This road is in the Townships of Aberdeen and Aberdeen Additional. Commencing at lot 12, concession 4, and ending at lot 1, Boundary of Aberdeen, the road was graded, gravelled and ditched.

Sudbury-Soo Trunk Road.

The Sudbury-Soo Trunk Road has been located and surveyed from Sudbury to the Soo, passing through or near all villages situated along the Soo Branch of the C. P. R. The total length of the road is 193 miles, 94 miles of this is new location and about 99 miles is along existing roads or old location; portions of the new locations were caused by making deviations to avoid bad grades, and in some instances in shortening the distance; about 25 miles of the new road is from Cutler to Blind River, where no previous road existed. Up to date 97 miles of roadway has been cleared to a width of 66 ft., with the central 30 ft. stumped and grubbed; 37 miles has been graded on the Eastern end of the road, permanent concrete culverts and re-inforced steel bridges have been put in, and concrete tile used on several sections, the smallest tile used is 15 inches in diameter and the largest 36 inches; cedar culverts have been used in some sections owing to the difficulty of transporting concrete tile in advance of the new work; the culverts and tiles have all been constructed by day labor under foremen. The portion of the road between Sudbury and Copper Cliff, a distance of about 2¼ miles, is a splendid piece of work. The heaviest grade on this section of the road is now 4 ft. in 100 ft., and this only for 300 ft. Owing to the heavy traffic between the two towns and the sandy nature of the soil it was found necessary to place broken stone over the whole distance; this stone was obtained from the Canadian Copper Company's Mine at Creighton, it being crushed and loaded at the mine, and shipped to Sudbury a distance of 13 miles, the rock supplied was Norite of excellent quality, and after one year of heavy traffic has shown very slight wear. Grading from Copper Cliff Station to the Vermillion Bridge, at Nicol City, has been completed a distance of 11 2-3 miles, and grading from the bridge to the Creek east of White Fish is well under way. Grading has also been done between Nairn and Espanola, a distance of ten miles; this section also crosses the Spanish River at the new bridge, erected by the Government in 1909. One-and-a-quarter miles of grading was also done this year west of Blind River, and serves an excellent settlement along the Mississaga. Also between the

towns of Webbwood and Massey the grading has been completed, with the exception of approaches to bridges at Birch Creek, Hoeffler Creek, Spruce Lake and the railway overhead crossing. The right of way has also been cleared through Indian Reserve, at Garden River, and will connect with an excellent farming settlement at Echo Bay, Barr River and McLennan. It was thought best to make a new location between Echo Bay and the Soo rather than use the old one, as it saves a distance of five miles, besides being almost a level road throughout.

West Division.

Ahmic Lake Road, in Croft.—In the Township of Croft, lot 21, concession 4, ending at lot 22, concession 4, 86 rods stoned and graded around Ahmic Lake, and four new culverts put in.

Amabel Township, Conditional Grant.—The following work was done by the Municipality:—On Oliphant Road, from North Boundary to Townline between concessions 23 and 24 and ending at lot 22; also from boundary line north of Colpoy's Bay to North Boundary between Amabel and Albermarle, and on the boundary line of Epworth, lots 3 and 20 and 3 and 15, and west boundary line on concession 10 and between 10 and 12, seven or eight miles of grading and gravelling done under the Municipality; the Government contributing one-half of the expenditure.

Armour Township, Four and Six Concession Road.—From lot 12, concession 5, ending at lot 12, concession 6, a new road was opened out leading to Burk's Falls.

Ardtrea and Washago Road.—North of Orillia, east half of lot 8, concession 12, and ending at lot 9, concession 13, the road was graded and straightened, a large quantity of broken stone put on, and the road gravelled.

Baxter School House Road.—On road to No. 1 School House, in Baxter, 1½ miles of new road was built from Go-Home Road to Honey Harbor Road, chopped 50 ft. wide, grubbed 30 ft., and graded in the central 18 ft., making a first-class serviceable road, and shortening the distance to the school some four miles, which is much appreciated by the settlers.

Baxter Gibson Roads.—In the Township of Baxter 3½ miles were improved from lot 31, concession 9, to lot 38, concession 11. This road now gives direct communication from Port Severn to Honey Harbor. In Gibson Township 4 miles of road were improved from the Townline of Gibson to the C. P. R. track.

Bear Lake Road, Monteith.—Lot 12, concession 9, ending at lot 13, concession 8, one mile of road was repaired, ditched and graded.

Bethune, Twelfth Concession Road.—Commencing at lot 6, concession 12, and ending at lot 11, concession 12, the road was graded and repaired for 1¼ miles.

Booth Line Road.—This work is situated in Orillia township, lots 18 and 19, concession 5. The work consisted of gravelling a portion of the road through a swamp, a coat of broken stone was also spread on top, and the road generally repaired for two and one-third miles.

Broadbent Road to Inholme Road.—On lot 16, concession 4, ending at lot 12, concession 5, 1½ miles of road repaired, consisting of ditching, blasting and grading up.

Blackwater Road.—This road is in the Township of McKellar, commencing at lot 16, concession 1, in McKellar, and ending at lot 16, concession 13, in Christie, three-quarters of a mile of the road was ditched and graded.

Byng Inlet Station Road.—In the Township of Wallbridge, lot 45, concession 12, ending at lot 42, concession 11, three-quarters of a mile of the road was re-

paired between the C. P. R. Station and Byng Inlet; the work consisted of ditching, grading and putting in culverts.

Brunel-Stephenson Roads.—On the Utterson and Parry Sound Road, lot 15, concession 6, and ending at lot 9, concession 7, in Stephenson, the road was repaired for 1¾ miles, three culverts were put in, 55 loads of broken stone and 145 loads of gravel distributed; the grader was used over the whole road, a large quantity of blasting rock was done, the township suppyling the dynamite. In the Township of Brunel 2½ miles of the road was improved from lot 14, concession 8, to lot 16, concession 5, 510 loads of gravel distributed, and the grader used from one end of the road to the other, putting this road in first class condition.

Carling and McDougall Townline.—In the Township of Carling, lot 40, 42 rods of swamp ditched and the Narrows in Blair's Creek blasted out to keep water from flooding the road.

Chapman, Fifth Side Road.—Lots 5 and 6, concession 8, and ending at concession 10, a new road was chopped out and partly graded for a mile and a quarter; the Creek was also bridged over. This road was built to enable the children to get to school.

Christie, Concession 8 Road.—Lots 13 and 14, concession 8, one-half mile of deviation was made around two large hills, the road brushed and ditched, and 10 new culverts put in.

Commanda Lake Road.—In the Township of Pringle, lot 31, concession 14, ending at lot 32, one-half mile of new road was chopped and graded; and in Patterson township, lot 31, a quarter of a mile of new road was made.

Chapman Township By-law.—Good work was done under the Municipality of Chapman consisting of the following:—Lot 83, concessions A and B North to lots 110 A and B, 4¾ miles of road graded; lot 10, concession 8, to lot 104, concession B, the road was repaired and graded for three miles. On 25 Side road through lots 24 and 29, three miles of road repaired and partly graded. Over 1,000 loads of gravel distributed on the three above roads, representing about eleven miles of work. The Government contributed one-half the expenditure in connection with this work.

Draper and Oakley Roads.—In the Township of Draper, a deviation was made around Sharp's Hill, widening out a deep cut put in last year, the sides having fallen in; 2,000 loads were hauled out and dumped at approaches to bridge. On Black River Road, in the Township of Oakley, lot 22, concession 1, lot 32, concession 8, the road was improved for seven miles, the road grader being used for several days; four stone culverts also put in.

Eastnor Township, Conditional Grant.—In the Township of Eastnor, between concessions 4 and 5, the road was graded and gravelled, repairs and improvements were also made between concessions 2 and 3, opposite lots 15, 24 and 40, and from Drury to the 5th concession west, the road was gravelled, graded and ditched, and from the Government Road east from 10 side road to Townline, and between concessions 8 and 9, opposite lots 11 and 14, the roads were graded and gravelled, representing an expenditure of $1,614; of which the Government contributed one-half.

French River Road.—This road is in the Township of Mowat, which has not yet been surveyed, and is to give the people a winter road to the C. P. R. station. The road was chopped out for three-quarters of a mile and partly graded, and 92 rods of corduroying across a muskeg.

Goose Neck Valley Road.—In McKenzie township, lot 33, concession 1, ending lot 35, concession 2, 1¼ miles of the road stoned and graded and crosslayed for 6 rods.

Great North Road.—In the Township of Hagerman, lot 40, concession 4, and ending at lot 35, concession 3, two miles of the road graded and generally repaired.

Great North Road, in McKellar.—In McKellar township, lot 32, concession 2, and ending at lot 12, concession 10, the road was generally repaired and improved for four miles.

Gurd and Himsworth Boundary.—Commencing at lot 37, concession 4, and ending at lot 37, concession 6, the road was ditched and well graded for more than a half-mile.

Healy Settlement and Orange Valley Road.—In the Township of Christie, lot 5, concession 10, and ending at lot 1, concession 10, improvements were made on the road for 1½ miles.

Hurdsville and Snowden Road.—This is in McDougall township, lot 1, concession 9, ending lot 2, concession 10, the work consisted of blasting, filling in at the bottom of a large hill, some 900 yards of earth and gravel.

Joly Road.—In the Township of Joly, lot 9, concession 12, ending at lot 10, concession 12, a new piece of road was chopped out and graded for half a mile; two cedar culverts put in at the bottom of a large hill.

Kill Bear Point Road.—In the Township of Carling, lot 64, concession 12, ending at lot 66, concession 11, three-quarters of a mile of new road cut out, half-mile graded; and bridge built across a creek 27 ft. long.

Laurier Fifth Side Road.—From lot 5, concession 10, ending at lot 5, concession 9, a mile and a quarter of new road cut out and partly graded.

Lindsay Township, Conditional Grant.—The work was done under the Municipality of Lindsay, with the Government supplementing the grant by an equal sum. General repairs and improvements were made to the roads, consisting of grading, gravelling and ditching.

Lount Tenth Side Road.—Lots 10 and 11, concession 10, ending lot 8, concession 10, three-quarters of a mile chopped out, and 78 rods cedar crosslayed over a swamp.

Lount and Chapman Townline.—Half a mile of new road chopped out and graded, on boundary between Chapman and Lount, lots 3, 4 and 5.

Loring and Wallbridge Station Road.—General repairs and improvements were made on the road from lots 5 and 6, concession 5, ending at lot 21, concession 13, Wilson, representing some 15 miles of work.

Mills Eighth Concession Road.— In Mills township, lot 26, concession 8, and ending at lot 27, concession 8, half mile of new road was chopped out and graded, and half-mile of the old road repaired.

McKenzie Third Concession Road.—From lot 3, concession 3, McKenzie, ending at lot 7, three-quarters of a mile of new road cut out, running along Deer Lake.

McKellar Centre Road.—In McKellar township, lot 20, concession 9, the road was graded and repaired for 2½ miles.

McKellar Second Concession Road.—From lot 24, concession 2, to lot 22, concession 2, half mile of very bad road was repaired; considerable blasting being done.

Medora-Wood and Carling Roads.—In the Township of Wood, lot C, concession 5, and ending at lot K, concession 13, 3 miles of the road generally repaired and improved; this is known as Leg Lake Road. On the Morrison Townline, ending at lot C, concession 18, 1½ miles of the road graded and 4 culverts put in, and the sides of the road brushed out. On Lake Joseph Road a deviation was made around two hills three-quarters of a mile from Port Sandfield; and the road cut out 40 feet

wide through green bush, the central 20 feet being cleared and graded. This part of the road was left unfinished.

Monck-Macaulay Roads.—From Stead's Corners, in Falconbridge, the Monck Road was graded for a mile and a half, 2 hills cut down, large quantity of rock blasted, and 5 stone culverts put in. From lot 1, concession 8, to Stephenson Townline, 4 miles of general repairs and improvements were made, consisting of blasting, removing boulders, grading and ditching, and brushing out the sides of the roads.

Morrison-Franklin Roads.—On Killworthy Road, lot 25, concession 3, ending at lot 23, concession 8, the road was generally repaired and gravelled, 170 loads of gravel and 132 loads of clay were distributed, and the grader used for three days, improving the road for three miles. On Bull's Run Road, in Franklin township, lot 4, concession A, ending at lot 9, three miles of the road repaired and graded, sides brushed out, 7 culverts erected; 1 bridge built, 16 feet long, 165 loads of gravel distributed, and 25 rods covered with broken stone. This makes a good, travellable road from Dwight to Dorset.

Muskoka-Ryde Roads.—On Doe Lake Road, in Muskoka township, from lot 6, concession 3, to lot 10, concession 5, 3½ miles of road graded and 350 loads of gravel distributed and several hundred old crossway logs removed. In the Township of Ryde, lot 15, concession 13, and ending at lot 30, general improvements and repairs were made for 4½ miles, 4 stone culverts put in, 2 hills cut down to an easy grade, and 35 loads of gravel and 126 loads of earth distributed.

McLean-Ridout Roads.—On the Brunel and Huntsville Road, in McLean township, from lot 16, concession 11, to the townline of Brunel, two miles of road brushed, graded and generally repaired; and on the Lake Shore, in Ridout township, from Brown's Brae to Townline of McLean, two miles of general repairs made.

Medonte Township Road.—From the C. P. R. to Coldwater, lots 21 and 23, concession 12, the road was ditched on both sides, graded and gravelled.

Matchedash Township By-law.—The Municipality erected a steel structure bridge, and repaired one-eighth of a mile of road, at a cost of $1,272.54; the Government contributing one-half.

Nipissing Road, in Humphrey.—From lot 76, concession 10, ending at lot 72, concession 12, in Humphrey township, 1½ miles of road generally repaired, considerable blasting had to be done; the township supplying the blasting material. This is the leading road between Sprucedale and Rosseau.

Perry 25th Side Road.—From lot 26, concession 2, and ending at lot 25, three-quarters of a mile of new road cut out, cleared and brushed.

Perry and Monteith Road.—On the Sprucedale Road, lot 23, concession 10, and ending at lot 25. 180 rods of road gravelled. and on lot 23 and lot 24, 140 loads of gravel were distributed. The road was also well ditched and graded.

Pringle and Alsace Road.—In the Township of Gurd, from lot 3, concession 11, ending at lot 6, concession 11, the road was repaired for 1¼ miles. This is used by the people in Restoule.

Pringle Township, Great North Road.—Lot 8, concession 9, ending lot 14, concession 4, 3½ miles of new road repaired.

Restoule and Powassan Road, in Gurd.—Lot 203, concession 18, ending lot 201, concession 8, three-quarters of a mile of very bad road was stoned and gravelled.

Restoule and Powassan Road, in Nipissing.—From lot 44, concession 6, ending at lot 16, half-mile of road was stoned, grubbed and graded.

Round Lake Road, and 8th Concession in McMurrich.—Lot 26, concession 8, in McMurrich, the road was graded and gravelled for three-quarters of a mile, 111 rods of cross-laying over a muskeg, and the same covered with gravel. On lots 8

and 9, concession 7, to lots 11 and 12. This is a new piece of road, and was generally repaired.

Rose Point Road.—In the Township of Foley, lot 34, concession A, 150, and ending at lot 34, concession B, two miles of the road repaired, consisting of blasting, ditching and grading.

Ryerson 7th Concession Road.—From lots 6 and 7, concession 7, a short piece of new road was cut out.

Road in Hagerman to Shawanaga Station.—On lots 123 and 124, concession 5, a mile and a half of new road cut out and partly graded; on lot 1, concession 2, to lot 7, concession 3, two miles of new road chopped out; and 4 new bridges built, two 30-foot spans, one 25-foot span, and one 50-foot span.

Sand Lake Road.—Lot 3, concession 13, ending at lot 5, concession 14, in Bethune, two miles of road gravelled and ditched.

Sundridge and South River Road.—On Five Side road, Township of Strong, lot 25, concession 11, and ending at lot 25, concession 13, 1¾ miles of road gravelled and repaired.

Spence, Between Lots 22 and 39.—On Monteith and Spence Road, lot 23, concession 11, and lot 38, concession 13, the road was graded, ditched and generally repaired.

Sprucedale Road.—In Ryerson township, lot 15, concession 1, and ending at lot 16, concession 1, half-mile of new road chopped and graded, and on the Bordeau Road, in Ryerson, lots 30 and 31, concession 1, ending at concession 2, a deviation of one mile was made, and the road generally repaired.

Strong, Between 12 and 13.—Lot 13, concession 10, and ending at concession 9, 1¼ miles of new road which was cut out last year was graded and completed. On lot 31, concession 13, 90 rods of new road chopped out and graded, and a new stone bridge built on lot 27; the length of bridge 80 feet and 16 feet in height. This takes the place of the old wooden bridge, which was pulled down.

South Himsworth 5th Side Road.—On lot 5, concession 10, ending at lot 4, gravelling, ditching, and grading done, and the road completed across lots 4 and 5.

South Himsworth 25th Side Road.—On lot 26, concession 7, ending at lot 26, concession 8, half-mile of new road chopped out and graded, so as to avoid some large hills. The right-of-way was bought by the Township of Himsworth.

Shawanaga Station Road.—In Carling and Shawanaga, lot 25, concession 9, and ending at lot 18, concession 2, a mile and a half of new road was chopped out and partly graded; and a new bridge built on Shawanaga River, with two new piers filled with stone; the length of the bridge 76 feet. All the planking for this bridge was furnished free of charge by the Kaufman Lumber Co. This is a new road, and now passable to the Shawanaga Station.

Sinclair and Chaffey Roads.—In the Township of Sinclair, lot 25, concession 9, ending at lot 30, concession 10, the road was generally repaired, cutting brush on both sides of the road, blasting rocks, and removing boulders; a bridge 56 feet long across a gully was erected, and two large hills cut down, improving the road for two and a quarter miles. In Chaffey township, lot 20, concession 2, ending at lot 24, concession 3, 1,057 loads of gravel distributed, and the road grader used for 2½ miles, making a first-class job.

Stisted By-law.—This work was done under the Municipality, and is considered very satisfactory. Thirteen miles of road improved on Lake Vernon, and five miles graded up with the road grader, a large quantity of gravel distributed, putting the road in first-class shape. Through lot 2, concession 13, to lot 33, concession 7, four miles graded and repaired; and on 15 and 16 Side road, from concession 5 to con-

cession 12, the road was generally improved. These are the leading roads through the Township to Huntsville.

St. Edmund's Township By-law.—The work was done under the supervision of the Municipality, and consisted in generally improving and repairing the road, about two miles of work done; the Government paying one-half of the expenditure.

Watt and Cardwell Roads.—In the Township of Cardwell, lot 66, concession A, ending at lot 26, concession 5, the road was graded, and 400 loads of gravel distributed, 8 culverts put in, several large boulders removed, and the road generally improved for four miles. In the Township of Watt, on what is known as the Dee Bank Road to Port Carling, lot 22, concession 6, and ending at lot 25, general repairs were made on the old road, brushing it out, blasting and removing boulders, 6 culverts put in, and the ditches cleaned out. This makes the road now passable for one and one-quarter miles from Dee Bank to the lake. The township supplied the dynamite.

East Division

Airy Township Roads.—Commencing at lot 7, concession 5, and ending at lot 8, 1½ miles of road graded and drained, and 4 culverts put in. This is known locally as the Whitney Road.

Appleby, Between Concession 3 and 4.—On lot 8, concession 2, the road was grubbed, graded and gravelled for half a mile, and a large ditch dug to carry off the water.

Addington Road.—In Kaladar township, lot 10, concession 7, and ending at lot 17, the road was generally improved by putting in culverts, cleaning out the ditches, grading and gravelling.

Anstruther Township Roads.—On lot 30, concession 7, two hills were cut down, all the old, decayed and fallen logs and stone removed from the road, some tile culverts put in, and a half-mile of new road opened up as far as Kelly's; three miles of the road improved. Lot 1, concession 8, in Burleigh, and ending at lot 15, concession 12, the road was under-brushed and repaired for a distance of two miles.

Alice B. Line Road.—Lot 22, concession 9, ending at lot 29, concession 10, the road was generally repaired.

Admaston Township Roads.—From lot 10, concession 10, and ending at lot 10, concession 11, a large swamp was filled in and covered with stone, and 4 culverts built. This is known as the Shamrock and D'Acre Road. On the Ferguslee Road, lot 10, concession 2, and ending at lot 8, concession 2, the road was side-drained and gravelled, some concrete culverts put in, making one mile of a first-class road.

Brudenell and Lyndoch Road.—Lot 29, Bonnechere Range, ending lot 10, concession 14, the road was generally repaired for four miles.

Brougham Township Roads.—On the Mount St. Patrick and D'Acre Road, lot 6, concession 15, and ending at lot 9, about 1½ miles, the road was generally repaired and put in first-class shape. On lot 3, concession 12, ending at concession 13, a large hill was cut down on what is known as Mountain Road, the roadside drained and made passable.

Bonfield Township Roads.—General improvements and repairs were made on the roads throughout the township at a cost of about $1,600, consisting of the following work:—On lot 4, concession 7, and ending at lot 1, concession 7, the road was graded, gravelled and drained, and 5 culverts put in. On lot 7, concession 9, ending at lot 5, concession 9, three-quarters of a mile gravelled. On lot 31, concession 4, and ending at lot 35, the road was graded and drained for half a mile. Lot 32, concession 14, and ending at lot 28, about five-eighths of a mile generally

improved. On the 20th side line, lot 20, concession 4, the road was generally brushed up, graded and drained, and 3 culverts put in. On the Bonfield and Powassan Road, lot 10, concession 1, the road was generally repaired. At lot 33, concession 2, and ending at lot 34, three-quarters of a mile of grading and brushing done, and the road generally levelled up. On Booth Road, lot 1, concession 4, in Ferris, the road was graded and drained and 5 culverts put in. Lot 20, concession 10, the road graded and a heavy hill cut down; representing in all some 13 miles of work.

Boulter Township Roads.—Lot 3, concession 8, and ending at lot 8, concession 9, the road was graded and generally repaired for 1¼ miles, and 5 culverts put in; also on lot 19, concession 9, and ending at lot 14, three-quarters of a mile of road improved.

Bessemer and Long Lake Road.—In the Township of Mayo, lots 13 and 14, concession 8, the road was cut out, cleared, and some grading and crosslaying done across 18, 19, and 20, making one and a half miles of splendid road.

Bancroft and Hermon Road.—In Dungannon township, lots 7, 8, and 9, concession 11, and ending at lot 12, the road was generally repaired, removing boulders, blasting, putting in culverts and grading.

Bessemer and Hermon Road.—In Mayo township, lot 10, concession 7, ending at lot 11, the road was graded and ditched, and gravel distributed over half a mile of the road made last season.

Bancroft and L'Amable Road.—In Dungannon township, lot 44, Hastings Road, some repairs were made consisting of removing boulders, blasting out the ditches, building culverts and grading up the road.

Bolingbrooke and Maberley Road.—Commencing at lot 11, concession 5, and ending at lot 12, concession 6, a new road was built around the side of a hill, and a large gully filled in with stone.

Boundary Between Bastedo and Gibbons.—Lots 1 to 15, concession 4, the road was graded, and gravel distributed for a distance of half a mile.

Booth Road.—In Field township, lots 8 and 9, concession 2, one mile of grading and ditching done, and a bridge built over Maskanonge Creek; and at lots 10 and 11, concession 4, a mile of road was cut out 40 feet wide and the central 30 feet grubbed, three-quarters of a mile graded and 8 culverts put in.

Beaudoin Road.—Lots 6 and 7, concession 1, a mile of road was cut out 50 feet wide, and the central 20 feet grubbed; two bridges erected of round timber, one 45 feet and the other 25 feet long, 2 culverts put in, and the road graded for some 700 feet.

Bedford Roads.—On Mast Road, in Bedford, lot 18, concession 8, and ending at lot 6, concession 1, the road was generally repaired for about 8 miles. On Canoe Lake Road, lot 11, concession 3, ending at lot 17, concession 8, general repairs were made, representing two miles of good work; and on Green Bay Road, lot 16, concession 4, a new road was made around a large hill about a quarter of a mile long, graded and levelled up. The road makes a good highway for the people living at Westport and Tichbourne.

Black River Road, in Dalton.—From lot 22, concession 12, ending at lot 17, concession 11, a large hill was graded down, two culverts put in, some side ditching done, and the road re-surfaced.

Blackdonald Mine Road.—In the Township of Brougham, lot 10, concession 3, and ending at lot 20, concession 3, in Bagot, the road was graded, gravelled and generally repaired for a distance of about 10 miles; 20 cedar culverts also erected.

Buckhorn Road.—Across lots 9 and 10, concession 10, considerable blasting was done, the old crossway logs removed, and 200 loads of gravel distributed; also on lot 15, concession 8, ending at lot 19, concession 8, 140 loads of broken stone used, as well as 150 loads of gravel. This part of the road is known as Scott's Mills Road, and has been put in first-class condition.

Burleigh Township Road.—Across lots 7, 8 and 9, concession 6, general improvements were made, cutting down a large hill, re-grading and surfacing the same with broken stone, and raising the roadbed with stone-filling to avoid a washout, and on lot 20, concession 12, ending at lot 10, concession 11, the road was generally repaired, using the split log drag with excellent results; this being an old sand road.

Belmont and Methuen Municipality By-law.—This work was done under the Municipality, and consisted of gravelling, grading and clearing obstructions off several parts of the road; the work was principally on concession 9, lots 1 to 6, concessions 5 and 6, lots 6 and 8, and lots 13 to 23, on concession 8, representing some 5 miles of work; the Government paying one-half of the cost.

Bellamy and Pakenham Road.—A large hill was cut down, two culverts put in, and some draining and gravelling done on lot 5, concession 6.

Bagot and Blythfield Roads.—On lot 20, concession 4, ending lot 22, concession 7, the road was generally repaired, graded and gravelled and three culverts put in; this work is on what is known as the Springtown and Ashdad Road, lot 15, concession 7, ending lot 16, concession 8. Some good repairs were made on the Burnstown and Calabogie Road, also on lot 17, concession 5, ending at lot 18, concession 10, general improvements were made, consisting of grading and gravelling and covering crosslay for a distance of about a quarter of a mile.

Cameron Township Roads.—On the Mattawa and Pembroke Road, in Cameron, starting at lot 8, concession B, ending at lot 14, concession B, three-quarters of a mile of road was brushed out and cleared, 23 chains graded, and 13 chains crosslayed and gravelled; also on lot 1, concession 25, the road was graded and drained, one culvert put in; and a 12-foot span bridge erected.

Calvin Township Roads.—Commencing at lot 14, concession 6, the road was cleared, graded and drained for half a mile, and two culverts put in. Lot 3, concession 2, ending at lot 1, concession 2, five-eighths of a mile graded and drained; and on lot 5, concession 1, ending at concession 2, general repairs were made, consisting of grading and draining for three-quarters of a mile, and putting in four culverts, representing about 2½ miles of work in this township.

Chisholm, Ferris and North Bay Road.—In the Township of Ferris, commencing at lot 20, concession 2, three-eighths of a mile of the road was cleared and graded, two culverts put in, and considerable blasting done.

Corundum Mine Road.—In Monteagle township, lots 7, 8, 9 and 10, concession 10, along the side road the road-bed was covered with broken stone, earth and gravel, and the side ditches cleaned out.

Courchaine Station Road.—In Delamere township, lots 7, 8 and 9, ending at lot 9, concession 1, two miles of road graded and ditched, nine culverts put in, half a mile of road gravelled, and an off-take drain made for a quarter of a mile.

Chisholm Township Roads.—General improvements and repairs were made this year in the Township of Chisholm, at an outlay of about $1,200, and consisted of the following work:—Lot 1, concession 3, 17 chains of cleaning and brushing done, grading and draining for 24 chains, and two culverts put in. On 5 side line, concession 13, ending at concession 14, half a mile of road graded and drained, and five culverts erected. Starting at lot 6, concession 16, and ending at lot 8, three-eighths of a mile of road graded and drained; a new bridge built over Graham

Creek, the abuttments filled with stone. On 20 side line, concession 12, ending at concession 13, half-mile of grading and draining done and three culverts put in. On 10 side line, concession 10, and ending at concession 11, a new piece of road was cleared out for five-eighths of a mile, half-mile graded and drained, 6½ chains crosslayed, and three culverts put in. On concession 8, lot 22, ending at lot 24, a new piece cut out for 4½ chains, graded and drained for three-eighths of a mile, and five culverts put in; representing in all some 5½ miles of work.

Cosby Township Roads.—From lot 6, concession 2, ending at lot 8, one mile of grading and ditching done, erecting two culverts and 1,000 feet of an off-take ditch; and on lot 6, concession 3, to lot 7, 500 feet of ditching done, six culverts put in, and the road well graded up.

Carden Township Roads.—From lot 9, concession 3, to lot 12, concession 2, the road was repaired, graded and gravelled, and on concession 4 considerable blasting done, filling a ravine with stone, and grading and surfacing the road with gravel.

Coe Hill Road.—In the Township of Faraday, lots 21 and 22, concession 2, to lot 5, concession 4, the road was generally repaired, removing stumps and boulders, ditching and grading up the road where necessary.

Cavendish Township Roads.—General repairs were made on the roads in Cavendish from lot 10, concession 6, to lot 16, concession 10, and from lot 11, concession 1, to lot 12, concession 2, the work consisted of under-brushing, removing stumps and trees, putting in culverts, re-building an old sunken road across two marshes, raising the same about 2 feet, using about 250 loads of broken stone; some four miles of work done in this township.

Chandos Township Roads.—On East Road, at Wolf Hill, the road was generally repaired, and on Phillip's Road, concessions 3 and 4, Rose Island Road, lots 28 to 32, concessions 12 and 13; and on Loon Lake Road, some general repairs were made, consisting of grading and gravelling.

Deer Lake Road.—Lot 1, concession 4, in the Township of Hugel, one-half mile of grading, gravelling and ditching done.

Dault Road.—In the Township of Badgerow, lot 3, concession 1, ending at lot 6, concession 1, a mile of grading, ditching and grubbing done, and about 200 rods of cross-laying over a swamp.

Dalton Township Roads.—Lot 27, concession 7, and ending at lot 30, the road was brushed and gravelled and re-surfaced. Lot 28, concession 3, ending at lot 30, concession 2, the road was generally repaired and graded.

Dead Creek to Harlowe Road.—In the Township of Kennebec, lot 30, concession 2, ending at lot 26, concession 8, good work was done, grading, filling several large holes with broken stone, and putting in some culverts.

Denbeigh and Palmer Rapids Road.—This road is between Renfrew and Addington; five large hills were cut down, and the road generally repaired.

Dead Creek Road, Near Westport.—In North Crosby township, lot 2, concession 8, ending at lot 3, the road was gravelled and ditched, some culverts put in, and about half a mile gravelled. This is the leading road from Bedford Mills to Newborne Village.

Douro Township By-law.—This work was done under the Municipality, consisted principally of grading with the road grader, clearing the road of stumps and boulders, straightening the roads where necessary, and putting in culverts. Some 10 miles of good work done; half the expenditure being borne by the Government.

Dummer Township By-law.—This work was done under the Municipality of Dummer, and consisted of some three miles of general repairs, grading and ditch-

ing, cutting down a large hill, and filling in at the bottom. Also a new road was cut through concessions 1 and 2, between lots 25 and 26. The work was very satisfactory; and the Government contributed one-half of the cost of the expenditure.

Darling 8th Line Road.—From lot 5, concession 8, ending at lot 6, concession 9, the road was built through a swamp, several culverts put in, and the road graded and gravelled.

Dungannon Township By-law.—From lot 30, concession 2, to lot 21, concession 2, one mile of road repaired from lots 14 and 15; from the fourth concession to the front of the eighth concession, one mile of general repairs; and from lot 22, concession 12, to lot 36, general repairs were made for one mile, representing three miles of work.

Dysart Municipality By-law.—Under the Municipality of Dysart, general repairs and improvements were made over some 12 miles of work, as follows:—North 10th concession west to Peterson Road four miles; on Peterson Road three-quarters of a mile; on Pine Lake Road one mile; and on the south shore of Grass Lake from Stanhope Boundary one and a half miles. From Haliburton to Harburn six miles; and on Harburn and Dudley Boundary Road three miles. One-half the cost of this work was paid by the Government.

Davis' Mills Road.—From lot 20, concession 8, ending at lot 21, concession 8, in the Township of Alice, a bridge was repaired across Indian River, and a half-mile of the road repaired.

Eldon and Carden Boundary Road.—On the Second Quarter Road and South Boundary of Carden, concession 9, the road was graded and gravelled.

Echo Lake Road.—In the Township of Hirchenbrooke, lot 6, concession 6, ending at lot 14, concession 5, very satisfactory work was done, consisting of grading and gravelling, filling the low places with stone, ditching and general repairs.

Elzevir and Grimesthorpe Municipality By-law.—The roads were generally repaired in different sections of the Municipality as follows:—From lot 3 to lot 10, concession 2, the road was graded and gravelled; through concessions 9 and 10, between lots 15 and 16, a large hill was reduced, graded, and gravel spread for half a mile, putting this road in first-class condition; and between concessions 9 and 10, from lots 18 to 21, three-quarters of a mile of the road was graded and gravelled; from lot 5, concession 4, to lot 8, concession 6, 2⅝ miles cut out and partly graded, and the approaches to the bridge built last year now completed; about 10 miles of work was done by the Municipality, of which one-half the cost was paid by the Government.

Ferris Township Roads.—On 15 side line in Ferris township, from lot 15, concession 8, ending at concession 7, some five chains of crosslaying was done and covered with earth and gravel, and the road generally repaired. On the North Bay and Bonfield Road lot 38, concession 18, and ending at concession 17, the work consisted of grading and draining and putting in culverts. A half-mile of grading and draining was done on the 10th Concession Road, between lots 21 and 24. Nosbonsing and Bonfield Road, lot 1, concession 4, 22 chains of road was cleared, graded, and drained, and three culverts put in. On the 15 side line, starting at lot 15, concession 10, the road was graded and drained for a distance of 19 chains; and on lot 17, concession 6, and ending at lot 26, concession 6, one and a half miles of road cleared and brushed and three culverts put in. Also on Shield's Road lot 12, concession 4, and ending at lot 11, quarter of a mile of clearing, grading and draining done, 20 yards of cross-laying, and 10 culverts put in; representing about five miles of work done in this township, which was very satisfactory, at an expenditure of $1,200.

Faraday Township By-law.—One and a half miles of good, general improvements were made from lot 3, concession A, to lot 6; the expenditure being borne jointly by the Government and the Municipality.

Gingras Road.—In Caldwell township, lot 11, concession 2, and ending at lot 12, half-mile of grading and ditching done, and from lot 1 to lot 2, in Kirkpatrick, one mile of clearing.

Griffith and Matawatchan Township Roads.—Improvements were made from lot 28, concession 2, ending at lot 15, concession 4, consisting of grading and gravelling, putting in culverts, and repairing a cedar bridge; and on the road to Matawatchan bridge, lot 10, concession 6, the road was raised at a point where the Madawaska River overflows every spring; and a cedar bridge built 30 feet long.

Gibbons to Crerar Road.—Between Gibbons and Crerar, lot 12, concession 4, half-mile of road graded and ditched, and one bridge repaired.

Galway Township Roads.—Splendid work was done in the Township of Galway, and consisted of the following work:—On Mintz Road, lot 16, concession 18, "Boldk" bridge was re-constructed. This is a floating bridge 120 feet long and 14 feet wide, and at lot 2, concession 18, to lot 23, on what is known as the White Lake Road, several hills were cut down and the road gravelled and re-surfaced; and on the French Line Road, lot 1, concession 10, the road was graded and gravelled and one stone culvert erected. On Swamp Lake Road, lot 2, concessions 13 and 14, and on Bobcaygeon Road, concession A, the roads were generally repaired and one bridge re-covered with cedar plank. Some under-brushing and grading done from lot 29, concession 4, to lot 32, concession 13, filling in the sides of a hill with broken stone, and building a 19-foot span bridge.

Grattan Township Roads.—On what is known as the D'Acre and Curry Church Road, lot 25, concession 21, and ending at lot 38, North Opeongo Line, a cedar bridge was built, and a mile of the road graded and gravelled. From lots 16 and 17, concession 23, to lots 18 and 19, the road was generally repaired, filling in a large swamp, side draining the same, and erecting one stone culvert. On Eganville and Caldwell Road, lot 22, concession 16, and ending at lot 23, some good substantial repairs were made, side-draining the road, removing stone and brush, and grading and gravelling; representing some five miles of road work done in this township.

Herschell Township Road.—On lot 19, concession 3, and ending at lot 20 and lot 26, concession 13, a new road was cut out, removing the stumps and boulders, cross-laying over some swamps, side-draining the road, several culverts put in, and the road partly graded.

Hastings Road, North of Maynooth.—In the Townships of McClure and Wicklow, working along lots 1, 2, 3, 9 and 10, and ending at lot 10, several bad hills were cut down to an easy grade, and the road put in good travellable condition.

Hastings Road, South of L'Amable.—In Dungannon and Faraday townships, lots 15 and 16, and ending at lot 26, 60 rods of heavy grading done through a swamp, a bridge built over Neal's Creek, length of the bridge 24 feet, covered with cedar covering, and the road generally repaired.

Hebert Road.—On lots 1 and 15, concession 2, in Field township, three-quarters of a mile of the road was graded and ditched, 250 feet of crosslaying done, and 400 feet of gravel spread.

Haddon and Martland Boundary Road.—Lot 5, concession 6, and ending at lot 7, concession 6, a mile and a half of new road cut and cleared 50 feet wide, half-mile grubbed 30 feet wide, and graded up for about three-quarters of a mile.

Hungerford Township Road.—From lot 34, concession 10, and ending at lot 31, the road was generally repaired and improved.

Harvey Township Roads.—From lot 2, concession 16, ending at lot 5, about three-quarters of a mile of old swamp road was repaired, about half an acre of land purchased to secure right-of-way, in order to avoid a large hill. On lot 21, concession 16, and ending at lot 19, concession 18, two miles of road graded and gravelled, and some ditching done.

Harvey Township By-law.—Under By-laws 300 and 301 of this Municipality a half-mile of work was done, and a bridge built over Eel's Creek. The work is situated on lot 6, concessions 7 and 8, and on lot 1, concession 16. The Government contributed one-half of this expenditure.

Lacroix Roads.—In the township of Field, lot 7, concession 3, ending at lot 9, concession 4, one and three-quarter miles of road graded and ditched, six culverts put in, one new bridge 100 feet long erected, one bridge repaired; and the road put in good, passable condition as far as the river bank. From lot 5, concession 3, ending at lot 7, concession 4, the road was graded, ditched and gravelled for one mile, four culverts put in, and three bridges repaired; and between lots 8 and 9, concession 4, Springer, and ending at lots 7 and 13, in Steele, concession 4, the road was graded and ditched for half a mile, a bridge 15 feet long erected, and a considerable amount of gravel spread over the road; representing in all about four miles of work.

Labrosse Road.—In Badgerow township, on Labrosse Road, near Laprairieville, one and three-quarter miles of gravelling and ditching done, 4,600 feet of crosslaying, and 2,700 feet of ditching also done on this road.

Leduc Road.—From Sturgeon South, for three-quarters of a mile the road was ditched and graded, and about 300 feet raised, a hill cut down, filling in a large ravine, and one culvert put in. The work is on lot 6, concession 8.

Limerick Township By-law.—The work was done under the Municipality, and consisted of grading, draining and gravelling, from lots 15 and 16, concession 2, ending at lots 20 and 21, concession 6, some 2½ miles. This work is well reported on, one-half the expenditure being borne by the Government.

Lanark 10th Side Line Road.—Lot 5, concession 10, and ending at concession 9, grading and gravelling done on what is known as the Swamp Road.

Laxton and Digby Roads.—Three-quarters of a mile surfacing with gravel done on concession 5, between lots 8 and 9; and on Victoria Road, concession 2, ending at lot 35, concession 3, the road was turnpiked, gravelled, and one culvert put in.

Madawaska and Hastings Road.—In the Township of Murchison, lot 26, concession 13, and ending at lot 25, the road was graded and drained for half a mile and four culverts put in; and on the road commencing at lot 14, concession 1, and ending at lot 22, one and one-quarter miles of grading and ditching done, five culverts put in.

Mattawan Township Roads.—On Mattawa Road, starting at lot 32, concession 5, ending at lot 31, concession 8, the road was graded and drained for 31 chains, and three culverts erected; and on Les Erables Road, lot 35, concession 6, ending at lot 35, concession 7, the road was generally repaired and drained for 23 chains; and on lot 32, concession 6, ending at lot 33, 19 chains graded and drained, and one culvert put in; representing about one mile of work.

Mattawa and Pembroke Roads.—On the Mattawa and Pembroke Road, starting at lot 4, concession B, and ending at lot 1, concession B, 7-8 mile graded and drained, and some 9 chains graded with earth and gravel; and starting at lot 6, concession B, in Clara, and ending at lot 68, concession B Maria, the roadway

was cleared of brush and stumped for a distance of three miles, and three small wooden bridges erected, one over McDonald Creek and one on Mahon Creek, and the other on Gibson Creek; and on the 8th Side Line Road, in Head, starting at lot 15, concession 8, the road was graded and drained for 18 chains, one bridge repaired, building a side jamb and filling with stone, on Mackay Creek.

Mattawa and Bonfield Road.—In Papineau Township, starting at lot 32, concession 14, and ending at lot 28, about five-eighths of a mile of grading, draining and gravelling done.

Maynooth and Madawaska Roads.—In Wicklow township, lot 25, concession 10, ending at lot 24, concession 11, a heavy second growth of brush cut out, boulders removed from the centre of the road and partly graded.

Methuen Road.—Lot 6, concession 5, ending at lot 10, concession 6, the old road was repaired and regraded, hauling earth and gravel on two hills, clearing away stumps and logs; and on lot 20, concession 4, to lot 25, concession 4, the road was under-brushed, cleared and graded, making in all about 3½ miles of work.

Martland and Cosby Roads.—Lots 1 and 12, concession 5, the road was generally repaired for three miles, and two culverts put in.

Mason and Scollard Road.—Between lots 1 and 12, concession 8, half-mile of road was grubbed and ditched, and two bridges repaired.

Madoc Municipality By-law.—In the Township of Madoc the roads were generally improved and repaired, covering a distance of about four miles, a bad hill was cut down to an easy grade, two small bridges rebuilt. Very good work done for the expenditure of $1,000, the Government contributing one-half.

Marmora and Lake Municipality By-law.—Work was done under the Municipality commencing at lot 27, between concessions 3 and 4, to boundary line between Marmora and Lake, about three miles of road was rebuilt and repaired, filling in with stone; and about two miles of grading and ditching in other parts of the township; representing in all about six miles of good substantial work.

Minden, Anson and Lutterworth Roads.—On the boundary between Snowden and Lutterworth, lot 3, concession 2, ending at lot 10, concession 1, considerable blasting of rock on a hill was done, and the road re-surfaced in several places. On Miners' Bay Road from Mansfield Mill to Gull Lake, the road was generally repaired and re-graded. From lot 1, concession 1, ending at lot 4, and on lot 1, concession 2, ending at lot 5, general improvements were made. Also on the River Road between concessions 2 and 4, the road was repaired and a bridge re-built. On the Bobcaygeon Road, from Minden North to Peterson Road, general improvements were made, and the road graded and gravelled. In Sherbourne township, concession 1, along concession 15, the low places were filled with brush and soil, and some small bridges rebuilt; and on the boundary of Digby, ending at Miners, some washouts were repaired; and the road re-surfaced with gravel. On the west side of Mountain Lake, lot 5, concession 6, ending at lot 7, concession 7, the road was repaired and gravelled and some culverts put in; general repairs were also made from lots 27 and 28, concession 1, from lots 18 to 21.

Monmouth and Cardiff Roads.—Lot 2, concession 8, ending at lot 16, from Bureligh Road West, the road was re-surfaced and repaired, and on lot 2, concession 22, some turnpiking was done, filling the soft places with stone, and surfacing with earth.

McPherson Township Roads.—On lot 3, concession 4, ending on lot 5, one mile of road graded, two culverts put in, and a bad spot 200 ft. long, 3ft. wide, and 4 ft. deep filled in with broken stone and gravelled.

North Crosby and Perth Road.—In the Township of North Crosby, lot 14, concession 2, general repairs were made for a distance of about four miles.

New Boyne Road.—In Bastard township, lot 1, concession 1, a new piece of road cut out, two hills cut down and gravelled, and some culverts put in.

Hagarty, Sherwood, Jones, Burns and Richards Township Roads.—From this appropriation work was done in the several townships named as follows:—On the Bark Lake Road, in the Township of Jones, lot 163, North Bonnechere Range, and ending at lot 65, general repairs were made, removing boulders from road sides, draining and grading. In Hagarty township, between lots 20 and 21, concessions 9 and 10, a mile of road was cut out. And on Bloskie's Hill, Wilno and Rockingham Road, lot 34, concession 4, a large hill was cut down and the road made passable; this is the stage line road. Also on Barry's Bay and Bark Lake Road, lot 33, concession 10, the road was drained and the crossway covered with gravel. In the Township of Richards, lot 10, concession 1, and ending at lot 11, a new piece of road was opened up, two cedar culverts put in, and a long piece of swamp crosslayed. On lot 11, concession 16, ending at lot 12, in Hagarty, a new piece of road was cut to avoid a large hill; and on lot 2, concession 13, ending at lot 2, concession 14, in the Township of Richards, a mile of road was generally repaired. A new piece of road was also opened out from the Village of Wilno to the Village of Barry's Bay, in the Township of Hagarty, which will shorten the distance some three miles, and has been reported on as well done.

Kirkpatrick and McPherson Road.—In the Township of Kirkpatrick, lot 7, concession 1, ending at lot 8, concession 1, three-quarters of a mile of the road was graded, one bridge repaired, six culverts put in, and a quarter of a mile of ditching done.

Kingston and Perth Road.—In North Crosby township, lot 3, concession 9, ending at lot 5, the road was generally repaired.

L'Amable and Fort Stewart Road.—From lot 4, concession 12, to lot 5, in the Township of Mayo, a new piece of road was opened up across lots 4 and 5, cleared and ditched, and the work done last year graded.

Laroque Road.—From lot 6, concession 4, to lot 7, the road was cleared and grubbed for half a mile, and one quarter of a mile graded.

Lacasse Road.—In Caldwell township, lot 3, concession 6, ending at lot 5, a mile and a quarter of general repairs.

Oso and Clarendon Road.—In Oso township, lot 16, concession 2, ending at lot 18, concession 3, the road was cut out, brushed and covered with gravel, and repairs made to a bridge, making this now a good, passable road.

Papineau Township Roads.—On the 25 side line, in the Township of Papineau from concessions 8 to 9, the road was repaired aad a bridge erected with stone abuttments, 4 ft. high and 18 ft. span, covered with 6 inch flat timber. The road was graded and drained for 25 chains and 3 culverts put in. On concession 15, lots 28 and 29, half-mile of new road cleared, and crosslay put down for a length of 2 chains at concession 12, lot 15, and ending at lot 13; 43 chains of road was cleared, graded and drained and 3 culverts put in. Commencing at lot 18, concession 10 ending at lot 20, improvements were made for half a mile, 4 culverts put in and some blasting done. On the 10 Side road, concession 12, 35 chains of grading and drainage done, at lot 5, concession 10 to concession 9; the work consisted of clearing three-quarters of a mile and grading and draining one-third of a mile. On the Townsline road, between Cameron and Papineau, lot 1, concession 5, the road was graded and drained for a distance of 26 chains, a 12 ft. span bridge erected and 1 large culvert put in. On the 6th concession at lot 6, the bridge over

Boone Creek was repaired and a new railing put on, 3 ft. high on each side, and the approaches graded up. Representing in all some 8 miles of work done in the township.

Peterson Road.—On lot 28, and ending at lot 30, on the Township line of Monteagle and Wicklow some hills were reduced to an easy grade, ditches blasted out, removing the boulders from the road, and a bridge across Maynooth Creek renewed. In the Township of Bangor, lot 21, concession 7, and ending at lot 23, the road was generally repaired—grading, metalling, and blasting out ditches.

Pigeon Creek Road.—In the Township of Ennismore, lot 4, concession 8 and concession 7, the road was cleared, stumps removed, graded and raised with stone and gravel, 3 concrete tile culverts put in, and the road thoroughly improved for over one mile.

Pakenham Twelve Line Road.—Lot 14, concession 12, and ending at lot 15, a mile and a half of good work was done, grading and gravelling.

Ritchie Road.—In Palmerston township, lot 23, concession 2, a new road was cut out to take the place of the old Clarendon and Ardoch Road, which is being abandoned. The township paid for the right of way of this road.

Road, Westport to Sherbrooke.—In North Crosby township, lot 13, concession 7, and ending at lot 14, concession 7, blasting was done; and reducing Mountain Hill to an easy grade. Previous to this work it was impossible for a team to go down this hill, but this can now be done without any difficulty.

Ross Township By-law.—This work was done under the Municipality, and is reported by the Inspector of the District as highly satisfactory to the residents of the township; 24 miles of repairs done altogether, consisting of grading and gravelling and ditching; several concrete culverts put in. The work was on the Queen's Line, concession 7, lots 10 to 20; Grant Settlement Road, between lots 10 and 11, concession 9; Hailey Station Road to concession 4, lots 20 and 21, and on the road in front of concession 2, from lot 21 to lot 16.

Ramsay Road.—Lot 10, concession 1, ending at lot 11, concession 2, a new road was opened up, graded and side drained, making a good highway from Clayton to Almonte.

Raglan and Radcliffe Roads.—On lot 27, concession 10, in Raglan, ending at lot 28, concession 9, the road was opened up through a swamp, and the right of way cleared and covered with earth and gravel. On the Quadville and Jewelville Road, lot 28, concession 15, and ending at lot 29, concession 16, in Raglan, general improvements, consisting of grading and draining and some culverts put in; and on Palmer Rapids and Rockingham Road, lot 31, concession 4, ending at lot 30, concession 5, the road was graded and gravelled and generally improved for a distance of about 2 miles; and on the 18th Concession Line, lot 35, a new road was opened up, leading to Rockingham and Palmer Rapids, and a cedar bridge built, making a good, serviceable road.

Scotch Corners Road in Beckwith.—Lot 3, concession 12, and ending at lot 4, the work consisted of cutting down and side-draining a hill and blasting rock.

Somerville and Bexley Roads.—On boundary line of Snowden and Galway, lot 10, concession 2, and ending at lot 18, the road was side-ditched and some culverts put in and a large sink hole filled with logs and stones; and on concession 3, between lots 12 and 13, a hill was graded down, two short ravines filled in with stone, side ditches blasted out, and the road turnpiked and gravelled. On Coboconk and Burnt River Road, lots 22 and 23, concession 6, and lots 21 and 22, some ravines were filled with stone, and the road graded up and gravelled, and on the Gull River Range, lots 24 and 28, the road was generally improved.

Smoky Falls and Field Road.—In the Township of Springer, along the south shore of Sturgeon River, lot 4, concession 3, and ending at lot 5, the road was ditched and graded for about 1 mile and 6 culverts repaired, and in the Township of Grant 2½ miles of grading and ditching were done, and one-quarter of a mile gravelled, from lot 5, concession 4, to lot 6.

Smoky Falls Road.—In Springer township, concession 5, and ending at concession 2, 1½ miles of road gravelled, 6 new culverts put in, the brush cut along the road for a distance of 6 acres; and the bridge across Bentley Creek filled in at one end with stone, so as to prevent a wash-out.

Snow Road.—In the Township of Palmerston, lot 28, concession 4, a new road was cut out to avoid some heavy hills.

Stanhope, Hindon and Sherbourne Roads.—On Island Road, concession 1, ending at Buskong River, concession 2, the road was re-surfaced and some culverts repaired, and from lots 30 and 31, Sager's Store, south to concession 2, and east to the boundary of Guilford, the road was generally improved.

Swamp Road.—On Willow Swamp Road, boundary of Tyendinaga and Richmond, lots 39 and 40, concession 6, a large hollow in the road was filled in with stone, 24 rods long, 16 ft. wide, and a foot of gravel spread on top, a culvert raised three feet: putting the roadbed now above the water mark about one foot.

Sebastopol Township Roads.—On Sebastopol and Quadville Roads, lot 11, concession 7, ending at lot 12, concession 8, a very bad piece of crosslay was gravelled: and on Lake Clear and Mountain Road, lot 14, concession 12, and ending at lot 11, in Sebastopol township, the road was grubbed, cleared and gravelled. This is the road from Lake Clear to Vanbrough.

Snowden and Glamorgan Road.—North Dutch Line, ending at lot 28, the road was re-surfaced with soil and 2 culverts put in, and from the Station to Gooderham, ending at the south boundary of concession 1, 80 rods of new road was made, a new culvert put in, and a wash-out on the hill at concession 4 repaired.

Tudor and Cashel By-Law.—Work was done under the municipality as follows:—Commencing at lot 18, thence east to the Central Ontario Station at Millbridge, about 1½ miles graded and covered with broken stone: from lot 21 to lot 33, between concessions 2 and 3, one mile of grading and draining done; lot 17, concession 10, in Tudor, and following the Snow Road for one mile. General improvements were made from Gilmour Station, on the C. O. R., thence easterly two miles of the road was repaired, and one mile of new road opened up. This work is reported on by the Inspector as highly satisfactory for an expenditure of $1,000; of which the Government contributed $500.

Victoria Roads.—On the boundary of Carden and Bexley, lot 10, concession 1, and ending at lot 12, the road was graded and ditched, two culverts put in, and a large quantity of gravel spread: and on lot 2, concession 1, ending at lot 4, in Laxton, the work consisted of raising shell rock to make side ditches, and placing broken stone on the centre of the road and covering same with gravel.

Warren and Hugel Road.—The road was graded and ditched for 1½ miles; 6 culverts put in.

Warren and Crerar Road.—From lot 9, concession 9, ending at lot 1, concession 1, 2½ miles of work was done, consisting of clearing, grubbing and crosslaying.

Wilkinson and Carmanville Road.—In the Township of Portland, lot 25, concession 13, and ending at lot 26, the road was graded for 1½ miles and covered with broken stone and gravel, and 3 tile culverts put in; putting this road in first-class condition.

Wollaston Township By-law.—This work was done under the Municipality of Wollaston, and consisted of grading and draining the road from lot 1 to lot 20, and generally improving the line along concession 9, northerly through the centre of the township, repairing the face of several hills with broken stone; about 5½ miles of work done altogether for an expenditure of $1,000; of which the Government paid one-half.

Westmeath Township By-law.—Three and three-quarter miles of work done, consisting of grading and gravelling, three concrete culverts, and four cedar culverts put in. The work was done principally on the road between Cobden and Pembroke, commencing at the Townline of Ross and Westmeath, and on the Gower line opposite lot 8; and also on the road leading from the Village of Beachburg, concessions 5 and 6. Very satisfactory work was done for this expenditure, which amounted to $1,600; the Government contributing one-half.

Widdifield Township By-law.—Under the Municipality of Widdifield some 21½ miles of work done, consisting principally of grading and gravelling and generally repairing the roads throughout the township; one new bridge built, two bridges repaired, ten large culverts put in. The work was on Crook's Mills Road, Woodland, and Widdifield Road, North Bay and Trout Lake Road, Temiskaming Road, and on several of the side lines. The Inspector reports this work as very satisfactory, the total expenditure being some $3,500; the Government and the municipality each paying one-half.

Temiskaming District.

Armstrong, Concession 2, Lot 9.—From lot 7, concession 2, to lot 9, the road was cleared, stumped, and ditched for 1½ miles, putting in two culverts; making a very good piece of road.

Buck Township Municipality By-law.—In the Township of Buck some 14½ miles of road improved and two miles of new road opened up. The work was done throughout the township at the following places:—Haileybury to New Liskeard, two miles; Haileybury to Coleman line, three miles; concession line, Haileybury to Fleming's, across lots 5 to 11, three miles; concession 5, between lots 4 and 5, one mile; concessions 4 and 5, lots 6 and 7, one and one-half miles; on concession 5, between lots 8 and 3, concessions 4 and 5, lots 10 and 11, and along concession 5, across lots 5 and 6, two miles of new road opened; on the Lake Shore Road, Haileybury to Mill Creek and concessions 5 and 6, and across lots 1, 2, 3 and 4, four miles of road improved. The Government contributed half the cost of the above.

Brethour, Between Concessions 1 and 3.—From lot 8, concession 1, ending at lot 11, concession 3, the road was stumped, ditched, and cross-layed, and on line between concessions 1 and 2, lot 8, the road was ditched and graded, and 100 rods of crosslay covered with earth and gravel; and north across concession 2, the whole distance of road was stumped, 125 rods of cross-laying put down, and the road ditched on both sides; about three miles of work done altogether.

Beauchamp and Armstrong Townline.—On concession 4 the road was chopped, logged, and stumped for half a mile; two bridges erected, each 48 feet long and covered with tamarack timber; two culverts were also put in, and on concession 2 the road was stumped, ditched and graded for seven-eighths of a mile.

Buck, Concession 4 and 5 Road.—The Blind line between the north and south half was chopped out for one mile, stumping and clearing the roadway and putting in three culverts, making an outlet to take water off the roadway.

Brethour, Between Concessions 1 and 2.—Between 1, 2, and 3, lot 8, concession 2, and ending at lot 11, the road was stumped and ditched and partly cross-layed; ditching and grading was also done between concessions 1 and 2, and about 100 rods of crosslay covered with soil and gravel: and north from lot 8 for a distance of one and a quarter miles to the Lumberman's Trail the whole distance was stumped, ditched, and graded, and 125 rods of crosslay put down; altogether one mile of new road was cut out and cleared and one and one-half miles improved.

Cane Township Road.—On the Henwood and Cane Road, in the Township of Cane, lot 9, concession 5, and ending at Townline west, the work consisted of deepening ditches and culverts, stumping, and grading lots 11 and 12 to the western limit, and making an outlet up the townline to a ravine; putting in several culverts, making a good travellable road across the township to the Montreal River.

Catharine Township, South Townline.—From lot 12, concession 1, ending at lot 10, a mile and a half was chopped out 40 feet wide, stumped and grubbed 24 feet wide, and a quarter of a mile graded; three bridges erected, one 20 feet long, one 25 feet long, and one 30 feet long.

Charlton and Englehart Road.—In Dack township, lot 1, concession 6, ending at lot 4, the road was graded for one mile 22 feet wide, six culverts put in, and two hills cut down to an easy grade.

Casey Municipality By-law.—Under by-law No. 1 a mile and a quarter of new road was cut out on concession 1, and under by-law No. 2, two miles were improved and a mile of new road cut out; and under by-law No. 3, in different parts of the township, about two miles of road improved, and two and a half miles of new road cut and cleared. The work was done under the supervision of the Municipality, the Government paying one-half of the expenditure.

Coleman Township By-law.—In the Township of Coleman an expenditure of $32,686.25 was made, some 10½ miles of road were substantially improved; $3,500 of the above amount was invested in road machinery, a steam roller purchased, and also a rock-crusher, as it is the intention of Coleman Municipality to thoroughly improve all the travellable roads in the township. The Government this year contributed one-third of the above expenditure.

Dane Station Road.—Half a mile of road was cut out 50 feet wide, stumped 30 feet wide, and the central 24 feet graded, and six culverts put in.

Dack and Evanturel Boundary Road.—Lot 1, concession 2, ending at lot 1, concession 1, a large hill was cut down and a ravine filled in, three culverts put in, and the road chopped out and stumped, the full width for half a mile, and 40 rods of ditching done on one side.

Dack, Concessions 3 and 4.—Concession 4, lot 3, in Dack, one-half mile stumped 24 feet wide, four culverts 4 x 4, one 6 x 6, and one 4 x 4 put in, two hills cut down 6 feet, and half mile graded on one side.

Dack Township By-law.—Four and a half miles of new road cut out and 2½ miles improved: also cut out new channel for Beaver Creek for about 75 yards, and a small bridge built over it: reduced and graded hill and new ditches made. The work was done under the Municipality, one-half the expense being borne by the Government.

Dymond Township By-law.—Twenty-nine and three-quarter miles were improved, 3½ miles of new road opened, about 7 miles gravelled and the grader used on 11 miles of road. The roads are scattered throughout the township, the work being done under the Municipality, the Government paying one-half.

Evanturel and Ingram Townline.—Concession 5, Armstrong, ending at concession 2 in Ingram, 2¾ miles stumped and logged, half a mile cleared, making

3¼ miles of road opened up. Nearly a mile of ditch was made to carry the water away. This being a very bad muskeg, it was a difficult piece of road to make.

Evanturel By-law.—Three and a quarter miles of new road opened up, 20 miles improved. The work was scattered throughout the township, and was done under the supervision of the Municipality.

Grading and Repairing Old Roads.—The road grader was used over 61¾ miles of road in the Townships of Dymond, Buck, Harely, Casey, Hilliard, Armstrong, Beauchamp, Henwood and Harris at a cost of $1,500.

Henwood and Kerns Townline.—The road was graded across concession 2, and a King truss bridge built over a creek on pile abuttments with the necessary approaches covered with tamarack plank; half a mile of road opened up on concession 1, and a bridge built over Moffatt Creek, doing good work for the expenditure made.

Hilliardton to North Road.—Commencing at lot 7, concession 5, and ending at lot 8, concession 3, in Hilliard, the road was cleared and stumped, ditched and graded for 2½ miles, making a good road.

Harris and Casey Townline.—On lot 7 to lot 9 the road was stumped, crosslayed and ditched on both sides, and graded and stumped on one side. Fairly good work has been performed on the road.

Harley By-law.—Six miles of road was improved and four miles of new road cut out and cleared, 2 bridges erected, one 48 feet and one 32 feet long. The work was done under the supervision of the Municipality at an expenditure of $2,000; the Government paying one-half.

Hudson By-law.—Throughout the township 91¼ miles of road were improved, 3¼ miles of new road cut out, 7 miles well gravelled, and the grader used on 11 miles; the expenditure on these roads amounted to $3,000, the Government and the Municipality each paying half.

Ingram, Between Concessions Three and Four.—On lot 2, concession 4, and ending at lot 6, concession 4, half a mile of road was improved and crosslayed, ditched and graded across lots 3, 4, and 5, and some light ditching done on lot 6.

Ingram South Townline.—The road was graded and crosslayed from the Blanche River to Otter Creek, and ditched on both sides along line between lots 6 and 7, across concession 6, and half way on concession 5, Hilliard township. Excellent work was done for this expenditure.

Kerns and Harley Townline.—Commencing at lot 1, concession 6, and ending at lot 1, concession 4, the road was chopped and cleared half width across concession 6, and ditched and graded for 1 mile, chopped and cleared the full width on concession 5, and ditched both sides, and grading half a mile, making a good, serviceable road for 2 miles. The road was chopped and cleared half width across concession 4, and a ditch dug for a distance of half a mile. Two large culverts were put in over a small creek, making a fill to both culverts.

Kerns By-law.—Throughout the township 14 miles of road was improved, and 6½ miles of new road opened up; the Municipality and the Government both bearing an equal share of the expenditure.

Larder Lake Road.—Fifteen miles of the road repaired with the grading machine, 5 culverts put in; one bridge repaired and 350 loads of gravel put on the road.

Lunday Township, Between Concessions Two and Three.—Commencing at lot 1, concession 3, and ending at lot 3, concession 1, the work consisted of chopping

and stumping and clearing the roadway from the Townline of Hudson and Lundy West to 3; thence south-west along Moffatt's Creek about 2¼ miles, ditching the wet places, putting in necessary culverts and outlets, making a good, serviceable road.

Mountain Chute and Elk Lake Road.—This road is through the Townships of Barber and Tudhope, and consisted of chopping out, clearing, stumping and grubbing from the intersection of Mountain Chute Road around Mountain Lake, and along Montreal River, a distance of 6 miles. The wet condition of this piece of roadwork for 2½ miles made the work very difficult.

Marter Bridge Road.—Lots 6 and 7, concession 1, ending at concession 2, a mile of road was chopped out 50 feet wide, stumped and graded 30 feet wide, and 1 mile graded 32 feet wide; 14 culverts were also erected.

Matawapika River Bridge.—This is a floating bridge made in two pieces, one 225 feet long, fastened by rock bolts at one end, and at the other end by a chain to a tree. The other piece is 60 feet long with a 30-foot swing. This work was well done for the money, the expenditure being in the neighborhood of $300.

Mud Lake Road, Mileage 156.—In Pacaud and Marquis townships, lot 12, concession 1, ending at concession 4, 2½ miles of road graded 20 feet wide, 15 culverts put in, one bridge, 28-foot span, erected with approaches filled in on both sides, and crosslaying 10 rods.

North Boundary of Robillard.—The following work was done on this road:—Lot 1, concession 6, and ending at lot 10, concession 6, lots 1 and 2, ditches deepened and crosslayed 90 feet. Lot 3, crosslayed 80 feet, and both sides of the road ditched. Lot 4, one culvert put in; 50 feet crosslayed and ditched on both sides of the road. Lot 5, 2 hills scraped down, 1 culvert put in, 60 feet of crosslay, and 72 loads of earth and gravel spread. Lot 7, 80 feet of crosslaying done and on lot 10, 100 feet of crosslaying, and the road ditched on both sides for 240 feet.

Pacaud South Boundary Road.—Commencing at lot 5, concession 1, ending at lot 9, 2¼ miles of road graded 20 feet wide, and 6 culverts, 4 x 4, erected.

Savard, Two and Three, Road.—Commencing at lot 1, concessions 2 and 3, and ending at lot 3, the road was chopped out 40 feet wide, stumped and grubbed 24 feet wide, for a distance of 1 mile.

In the Township of Clute, between lots 12 and 13, from the Transcontinental Railway north through concessions 4, 5 and 6, 2¼ miles cut and grubbed, 1¼ of which was graded and corduroyed, and both sides of the road ditched.

Matheson to Munro Mines Road.—Through the Townships of Carr and Beatty, lot 4, concession 1, the road was cut out last year and partly graded. This year, 2 miles graded 20 feet wide, 4 hills cut down 5 feet, and one hill cut down 8 feet; a mile of crosslaying 14 feet long was laid, one bridge built, a ravine, 40 feet long and 6 feet deep, filled in.

Elk Lake to Gowganda Road.—This road was repaired and generally improved the whole distance of 27 miles, grading up in several places; putting the road in good travellable condition.

Charlton to Elk Lake Road.—Fourteen and a half miles of this road cut out 50 feet wide, 3½ miles cut out 17 feet, 33 feet of which had already been cut. The cutting and clearing was done under contract by Messrs. Black and Wagar. The grading of this road was done by day labour in two sections; seven miles graded through Robillard and Truax townships, lot 8, concession 2, ending at lot 6, concession 1: 3,941 feet of crosslaying 14 feet long put down; 71 culverts, 4 x 4, 16 feet long, erected; and two bridges built, one 200 feet long and the other 225

feet. Grading was also done under an overseer through the Townships of James and Truax, lot 5, concession 5, ending lot 6, concession 1. Six miles graded and well gravelled, 32 culverts, 4 x 4, 16 feet long, put in; 2,765 feet of crosslay put down, and four bridges erected, one 110 feet long, one 185 feet long, one 115 feet long, and one 175 feet long. This is now a first-class, travellable road from Charlton to Elk Lake.

New Trunk Roads.

From Matheson to Night Hawk Lake, between Carr and Bowman, lot 4, concession 1, and lot 11, concession 1, Taylor and Currie, 10 miles were chopped out 40 feet wide, the central 24 feet stumped and grubbed, and 8 miles graded 20 feet wide, 4,611 feet of crosslaying put down, 14 feet wide; 11 bridges built, averaging from 20 feet to 110 feet in length, and some 35 culverts put in.

On the Porcupine Road, in Cody and Whitney, lot 10, concession 6, ending at lot 9, concession 3, 6½ miles of road were cut out 40 feet wide, and stumped 24 feet wide; 4½ miles graded 20 feet wide, 5 bridges erected, three 20-foot spans and two 15-foot spans; 20 culverts 4 x 4 and 16 feet long and 177 rods of crosslaying. These two works were nearly all done by prison labor.

Frederickhouse Road, Mileage 222.—In the Townships of Clergue and Dundonald, lot 7, concession 4, ending at lot 6, concession 2, 7¾ miles chopped, stumped and grubbed; 4½ miles graded, nearly 2 miles of crosslaying put down and some 30 culverts erected as well as about 70 feet of bridging.

In the Township of Glackmeyer, lots 24 and 25, 4½ miles cut out and grubbed, 3¼ of which was graded and ditched: also between lots 18 and 19, 900 feet of crosslay was laid, and the road ditched on both sides. At lot 18, concession 4, a hill 250 feet was cut down 8 feet and graded and ditched on each side, and between concessions 2 and 3 in Glackmeyer township, from lot 18 east to lot 7, the road was cut and grubbed and 5,280 feet of corduroy; and from lot 18 to 13, 800 feet of a ditch dug; and between concessions 6 and 7, from lots 19 to 24, 1¼ miles cut and grubbed; and 1,059 feet corduroyed 16 feet wide.

The following is a statement of the expenditure:—

SUMMARY OF EXPENDITURE ON COLONIZATION ROADS AND BRIDGES IN THE YEAR 1910.

North Division.

Name of Work.	Expenditure.
Allan 10th Concession Road	$200 00
Atikokan and Mill Road	510 72
Aweres Road	797 69
Birch Lake Road in May and Hallam	800 86
Bruce Mines Road	1,000 00
Bridgland Road	300 00
Broken Front Salter Road	300 07
Boundary Line, Laird and McDonald	300 00
Bright and Bright Additional Road	305 97
Brandon Road	291 31
Barr River and Sylvan Valley Road	300 61
Barkley Road	247 45
Bidwell Township Roads	250 00
Burpee and Mills Township Road (Wood Section)	200 32
Burpee and Mills Township Road (Bailey's Section)	198 39
Blue Pratt and McCrossen Road	1,851 29
Balfour Township Roads and Bridge	800 70
Broder and Dill Township Roads (Bazinet Section)	200 00
Broder and Dill Township Roads (Gustave Lake Section)	197 96
Broder and Dill Township Roads (Richer Section)	200 00
Broder and Dill Township Roads (Pichoski Section)	200 40
Blake, Pearson and Scoble Roads	803 38
Batchewana Road	400 00
Cook's Road	303 08
Crabb Lake Road	298 01
Conmee Township Roads	784 75
Cockburn Island and Meldrum Bay Road (Irwin Section)	249 85
Cockburn Island and Meldrum Bay Road (Williston Section)	249 98
Campbell Township Roads (Reid Section)	204 05
Campbell Township Roads (Pearson Section)	201 51
Campbell Township Roads (Van Horne Section)	200 00
Campbell Township Roads (Clark Section)	150 12
Creighton Road, Lots 4 and 5	350 75
Capreol, Concessions 1 and 2 Road	374 22
Capreol, Concessions 2 and 3 Road	386 05
Day Mills and Dayton Road	300 10
Deviation of North Road in Galbraith	302 97
Day Mills and Iron Bridge Road	497 62
Desbarats Lake Road	508 37
Dayton and Dean Lake Road	306 64
Dinorwic to Vermillion Bay Roads:—	
Dinorwic to Wabigoon Section	470 35
Wabigoon to Dryden	503 86
Dryden to Eagle River	1,027 74
Eagle River to Vermillion	492 37
Dinorwic Road North	279 50
Dorion Township Roads	2,004 16
Dowling Township Roads	510 85
Eton Township Roads	600 17
Espanola Station Road	246 95
Foley Mine Road	495 04
Fairbank Road	350 00
Galbraith and Aberdeen Townline	400 41
Grassett, Concession 1 Road	315 30
Gordon Lake and Bruce Mines Road	506 82
Gordon Lake Road	101 73
Gordon Lake Road Extension	315 76
Gladstone Road, Concessions 3 and 4	150 12
Gillies Township Roads	799 18
Goldrock to Portage Road	507 12
Green Bay to Honora Road	299 95
Gore Bay to Barrie Island Road	398 37
Gorham and McIntyre Boundary Road, South	1,493 90

Name of Work.	Expenditure.
Goulais Bay and Kirby Mills Road	299 36
Goulais Bay Government Road	499 50
Harrow Township, Concession 5	296 33
Harrow and May Townline	275 00
Henderson Road	301 60
Honora to Little Current in Howland	342 50
Howland Township Roads (Gillies Section)	150 35
Howland Township Roads (Ferguson Section)	152 48
Howland Township Roads (Dunlop Section)	200 75
Howland, 4th Concession Road	247 03
Hagar Township Road and Bridge	705 42
Hanmer Township Road and Bridge	748 47
Haviland, Section 37 Road	299 84
Iron Bridge and Dean Lake Road	799 60
Jaffray and Mellick Municipality Roads (Day Section)	1,238 00
Jaffray and Mellick Municipality Roads (Barr Section)	1,237 35
Kagawong to Gore Bay Road—Balance of 1908	155 84
Kagawong and Gore Bay Road	500 14
Killarney and Collins Inlet Road	298 75
Kagawong and Providence Bay	200 25
Kingsford and Carpenter Townline	501 21
Kingsford and Fleming Road	1,004 56
Kirby's Mills to Bellevue Road	699 99
Lee Valley, Concession 4 in Hallam	299 33
Lefroy Boundary Road	396 51
Lefroy through Sections 5 and 6	298 28
Leeburn Road	298 93
Lybster Township Roads	800 14
Lyle Road	199 19
LePage Road and Bridge	200 00
Lorne Township Roads	249 99
Lake Wolsley Bridge Repairs	249 20
Lavallee, Burris and Dantz Road	807 02
Louise Township Roads	803 26
Lumsden Township Roads	748 65
Maitland Road	199 29
Marsh River and Montgomery Road	311 76
May, Concessions 3 and 4 Road	301 40
McKinnon Township Roads	299 99
Marks Township Roads	798 62
Mutrie Township Roads	248 56
Machin Municipality Grant	400 00
Manitowaning and Sheguiandah Road	501 78
Meldrum Bay and Gore Bay (Burn's Section)	407 50
Meldrum Bay and Gore Bay (Rumley Section)	303 65
Michael's Bay and Providence Bay Road	249 67
Manitowaning and Ingram's Hill Road	250 54
Manitowaning and Lake Manitou Road	500 45
Miscampbell Roads	504 34
Mather, Richardson and Potts Townline	491 43
Mather and Dobie Road	199 50
Morgan Township Roads	1,349 99
Markstay and Warren Road	999 85
Michipicoten Mining Roads	793 30
Nairn Township Roads	249 45
Nelles, Concessions 2 and 3	1,325 24
O'Connor Township Roads	794 88
Old Mine Centre and Glenorchy Road	502 36
Patton Township, Concession 5	299 95
Portlock and Gordon Lake Road	300 63
Plummer Additional Road	299 90
Plummer, Concession 6 Road	299 99
Pickerel Road and Bridge	298 74
Patton and Gladstone Road	300 41
Pellatt Township Roads	1,460 55
Potts Township Road	494 19
Pattullo and Sifton Centre Road	1,493 74
Road South of Espanola	350 25

Name of Work.	Expenditure.
Road in Lefroy, Section 16	303 18
Road, Concessions 1 and 2 in Galbraith	304 71
Road and Bridge in Aberdeen	300 00
Road, Concessions 4 and 5, Aberdeen	99 92
Rockville Road	411 25
Richardson Township Road and approaches to bridge	794 80
Road between Lots 21 and 22 in McIntyre	498 60
Road through Section 1 in Fenwick	299 00
Road from Batchewana Bay, Townships of Leigh and Kars	799 03
Striker, Concessions 3 and 4	505 32
Sowerby and Kirkwood Road	300 00
Shedden and Victoria Road	299 96
Salter Township Road	300 64
Strange Township Roads	693 35
Sheguiandah and Little Current Road	503 00
Silver Bay to Sandfield Mills	250 00
Sandfield Township Roads (Tann Section)	250 00
Sandfield Township Roads (Young Section)	249 25
Slash Township Roads	243 85
Sanford and Aubrey Road	803 61
Spruce Lake Road	391 12
Schreiber Road	449 20
Thessalon and Lefroy Road	766 75
Tarbutt, Concessions 5 and 6 Road	303 45
Townline Campbell and Carnarvon	250 81
Van Horne Township Roads	394 95
Vermillion Road	405 50
Vankoughnet No. 1 Side Road	148 19
Wells Township Roads	708 85
White Pennel Road	300 08
Wabigoon Road, North	250 33
Wainwright Township Roads	296 95
West Bay and Honora Road	249 49
Waters Township Roads	699 40
Wilson Road in Prince Township	201 12
Assiginac Township By-law No. 309	812 50
Assiginac Township By-law No. 313	799 15
Atwood Municipality By-law 1909	386 66
Atwood Municipality By-law No. 70	103 00
Alberton Township By-law No. 138	1,000 00
Billings Township By-law No. 185	599 43
Blezard Municipality By-law No. 43	900 00
Carnarvon Township By-law	900 00
Cockburn Island By-law	199 62
Chapple Municipality By-law No. 109	2,037 10
Chapple Municipality By-law No. 93	688 93
Dilke Township By-law No. 31	756 15
Dilke By-law No. 21	996 00
Drury, Dennison and Graham No. 89	800 00
Emo Municipality By-law No. 122	1,000 00
Gordon Municipality By-law No. 95	896 33
Hilton Township By-law No. 327	400 00
Jocelyn Township By-law No. 225	300 00
Johnson, Tarbutt and Tarbutt Additional No. 73	893 82
Korah Township By-law No. 71	2,000 00
Lavallee Township By-law No. 52 of 1909	1,320 00
Lavallee Township By-law No. 65	1,497 21
McDonald, Meredith and Aberdeen No. 83	750 00
Morley and Pattullo By-law No. 63	2,000 00
McKim Municipality By-law No. 90	577 23
McIrvine By-law No. 95—1909	1,179 79
Neebing By-law of 1909	2,188 86
Neebing By-law No. 280	472 21
Neebing By-law No. 281	964 99
Neebing By-law No. 282	1,000 00
Neelon and Garson No. 41	677 85
Plummer Additional No. 102	600 00
Prince Township No. 20	600 00
Paipoonge By-law No. 74	2,000 00

Name of Work.	Expenditure.
Rayside By-law No. 95	400 00
St. Joseph Municipality By-law No. 376	625 00
Shuniah By-law, 1909	700 00
Shuniah By-law No. 328	3,000 00
Tehkummah By-law No. 186	500 00
Thessalon By-law No. 13	299 98
Tarentorus By-law No. 96	1,498 94
Worthington and Blue By-law No. 21	1,000 00
Drainage Rainy River Roads:—	
Drain in Pratt Township	3,157 60
Drain in Township of Carpenter	680 00
Balance Burris Township Drain	368 00
Balance Crozier Township Drain	476 00
Balance Pattullo Township Drain	195 00
Expenses survey of drains	43 50
Inspection	6,024 20
Balance of Inspection, 1909	150 00
Balances of Account, 1909	552 74
Road Making Machinery	495 39
Dewhirst & Co., Sudbury-Soo Road, 1908	803 49
Over Expenditures on Accounts, 1909	1,249 51
Sudbury-Soo Road Accounts, 1909:—	
Canadian Copper Co., et al.	1,357 08
Jos. Pilon Contract	5,575 05
Sudbury-Soo Road, 1910:—	
Engineering and Survey Work	3,649 75
Concrete Work, Tile Draining, etc.	3,169 00
Blind River Section	3,158 36
Garden River, Indian Reserve Section	800 00
Grading Naughton to White Fish	9,954 10
Grading Section 4	2,334 38
Total	$161,221 12

West Division.

Name of Road	Expenditure.
Amabel Township Road	$693 15
Ahmic Lake Road, Croft	196 24
Armour Township, 4th to 6th Concession	200 00
Ardtrea and Washago	407 76
Bear Lake Road, Monteith	193 13
Bethune, 12th Concession Road	300 00
Broadbent Road to Inholme	299 66
Blackwater Road	250 00
Byng Inlet Station Road	500 00
Baxter-Gibson Roads:—	
Bala Road in Gibson	299 00
Port Severn and Parry Harbor	293 20
Baxter-Go-Home Bay Road	475 46
Brunel-Stephenson Roads:—	
Huntsville and Baysville Road	250 00
Utterson and Parry Sound Road	251 00
Carling and McDougall Townline Road	201 84
Chapman, 5 Side Line Road	200 00
Christie, Concession 8 Road	348 93
Commanda Lake Road	297 42
Draper-Oakley Roads:—	
Huntsville and Baysville Road	250 00
South Falls Road	250 05
Eastnor Township Roads	700 00
French River Road	497 82
Goose Neck Valley Road	393 55
Great North Road	300 75
Great North Road, McKellar Northerly	501 97
Gurd and Himsworth Boundary, Lot 37	200 27
Healey Settlement and Orange Valley Road	297 67
Hurdsville and Snowden Road	200 86
Joly Road, Concessions 12 and 13 Road	200 00

Name of Work.	Expenditure.
Kill Bear Point Road	200 00
Laurier 5 Side Road	200 20
Lount 10 Side Line Road	200 61
Lount and Chapman Road	200 11
Loring and Wallbridge Station Road	1,499 54
Lindsay Township Roads, Conditional	400 00
Medora-Wood-Carling Roads:—	
Port Sanfield to Joseph River	100 00
Lake Joseph Road, Port Carling	200 20
Port Carling Junction	148 25
Patterson Road from Boundary	151 20
Morrison and Wood Road	103 05
Monck-Macaulay Roads:—	
Faulkenburg to Steed's Corners in Monck	200 17
Stephenson and Macaulay Road	308 98
Morrison-Franklin Roads:—	
Concessions 3 and 4 to Kilworthy	250 00
Bulls Run Road	250 21
Muskoka-Ryde Roads:—	
Doe Lake Road in Muskoka	199 66
Doe Lake Road in Ryde	296 52
McLean-Ridout Roads:—	
Brunel Road McLean	200 00
Brown's Brae Road in Ridout	197 41
Mills, 8 Concession Road	201 30
McKenzie, 3 Concession Road	200 00
McKellar Centre Road	201 29
McKellar, 2 Concession Road	200 25
Medonte Township, C. P. R. to Coldwater	400 30
Nipissing Road in Humphrey	250 02
Perry, 25 Side Road	200 33
Perry and Monteith Road	200 25
Pringle and Alsace Road	200 45
Pringle Township, Great North Road	199 96
Ragged Rapids Road	200 25
Restoule and Powassan Road in Nipissing	395 92
Restoule and Powassan Road in Gurd	203 16
Round Lake Road, 8 Concession in McMurrich	400 99
Rose Point Road	300 80
Ryerson, 7th Concession Road	76 50
Road in Hagerman to Shawanaga Station (Johnston Section)	251 00
Road in Hagerman to Shawanaga Station (Began Section)	249 50
Road in Croft—right of way	195 55
Sinclair and Chaffey Roads:—	
Blind Line, Concessions 9 and 10 in Sinclair	250 41
East Road in Chaffey	250 12
Sharp's Creek Road	92 79
Sand Lake Road	400 95
Sundridge and South River Road	299 42
Spence Road, between Lots 22 and 39	205 93
Sprucedale Road:—	
Concessions 2 and 3, Ryerson	200 24
From Bordeau Road North	200 64
Strong, between Concessions 12 and 13	401 69
Strong, 13 Side Road	199 00
South Himsworth, 5 Side Road	200 87
South Himsworth, 25 Side Road	208 75
Shawanaga Station Road	299 80
Watt-Cardwell Roads:—	
Brakenrig to Dee Bank	250 00
Cardwell Road	250 00
Chapman Township By-law No. 5	397 35
Matchedash By-law No. 141	636 27
St. Edmunds By-law No. 118	500 00
Stisted By-law No. 172	500 00
Inspection	1,888 45
Balance of Accounts, 1910	56 81
Total	$26,973 15

EAST DIVISION.

Name of Road	Expenditure.
Addington Road	400 63
Airy Township Roads	499 50
Anstruther Township Roads	257 50
Admaston Township Roads:—	
Fergusiee Section	202 67
Shamrock and D'Acre	225 00
Appleby Road, Concessions 3 and 4	300 00
Bedford Roads:—	
Green Bay Road	200 45
Mast Road	250 00
Canoe Lake Road	148 39
Bancroft and Maynooth Road	309 60
Bancroft and Hermon Road	400 69
Bessemer and Hermon Road	203 74
Bessemer and Long Lake Road	393 40
Bancroft and L'Amable Road	200 23
Bollingbrook and Maberley Road	198 15
Bellamy Road in Pakenham	201 00
Bonfield Township Roads:—	
Bonfield and Nosbonsing, Lot 4	200 30
Concession 4 from Lot 31	149 96
Ferris Bdry., Lot 1, Concession 11	200 20
Concession 10, Lot 20	51 13
Bonfield and North Bay, Lot 7	150 07
Concession 2 from Lot 33, East	208 32
20 Side Line from Concession 3	204 45
Lot 5, Concession 4, West	199 43
Blue Sea Hill, Lot 11	250 00
Boulter Township Roads:—	
Concession 8 from Lot 3, East	249 95
Concession 9, Lot 10, West	250 00
Burleigh Township Roads:—	
Brown's Falls to Apsley	200 00
Burleigh Road	100 28
Burleigh and Apsley Road	49 99
Brudenel Lyndoch Roads—Killaloe Station	383 47
Buckhorn Roads:—	
Windover Section	150 00
Freeburn Section	149 93
B. Line Road	103 50
Boundary between Bastedo and Gibbons	199 81
Beaudoin Road	304 10
Booth Roads:—	
Filion Section	754 90
Larocque Section	739 75
Black River Road in Dalton	212 75
Black Donald Mines Road	1,001 64
Brougham Township Roads:—	
Mountain Road	201 00
Mount St. Patrick Road	200 00
Bagot and Blythfield Roads:—	
Springtown and Ashdad	200 40
Burnstown and Calabogie	150 00
McNulty Section	149 75
Corundum Mine Road	401 52
Coe Hill and Bancroft Road	300 60
Cross Lake and Madawaska Roads:—	
From Lot 7, Concession 10, South	250 20
From Lot 7, Concession 8, North	152 48
Cameron Township Roads:—	
Mattawa and Pembroke from Aumond Creek	201 45
Cameron and Papineau, Lot 1, Concession 25	203 25
Mattawa and Pembroke, Lot 13	190 00
Chisholm Township Roads:—	
Concessions 10 and 11 in front of Lot 10	299 57
Graham's Creek Bridge, Concession 16	299 76
20 Side Line, Lots 12 and 13	150 00

Name of Work.	Expenditure.
Townline Himsworth, Lot 1, Concession 3	151 44
From 20 to 25 Side Line	150 35
5 Side Line from 12 to 14 Concession	150 00
Calvin Township Roads:—	
Concession 6, Lot 14 West	250 00
5 Side Line, starting at Boundary of Lot 1	149 50
Concession 2, starting at Lot 3	200 00
Chisholm, Ferris and North Bay Road	400 80
Carden and Mara Townline	100 00
Chandos Road	102 75
Cavendish Township Roads:—	
Davis Section	150 00
Windover Section	145 00
Cosby Township Roads:—	
Concessions 2 and 3	300 00
Concessions 3 and 4	499 41
Courchaine Station Road	999 78
Carden Township Roads:—	
Second Quarter Line	100 00
8th Concession Road	100 05
West Side of Rockhill	100 04
Dalrymple Section	100 00
Davis Mills Road	203 84
Dead Creek to Harlowe Road	195 10
Denbigh and Palmer Rapids Road	199 40
Derry Road	175 00
Darling 8th Line Road	196 32
Dead Creek Road—Westport	201 33
Dalton and Washago Road	214 66
Dupree Road in Crerar	206 46
Dault Road in Badgerow	386 17
Deer Lake Road	399 99
Drainage Springer Road	840 00
Drainage Kirkpatrick and McPherson Road	934 54
Dalton Township Roads:—	
Hart's Road	100 25
Monck Road	200 00
Dalton, 1st Concession Road	100 00
Echo Lake Road	200 39
Eldon and Carden Boundary:—	
East End	99 97
West End	100 50
Faulkner Road	500 55
Ferris Township Roads:—	
Concession 4, Lot 12 East	152 50
Concession 18, Lot 38 East	250 00
Concession 10, Lot 15 West	150 42
Concession 10, 15 Side Line	100 39
Nosbonsing and Bonfield	152 50
15 Side Line, Concessions 7 and 8	200 10
Concession 6, Lot 14	203 10
Griffith and Mattawatchan Roads:—	
Griffith Road	188 35
Road to Mattawatchan Bridge	206 10
Grattan Township Roads:—	
Eganville Road and 17th Concession Line Road	223 00
Opeongo Line and 23rd Concession Line	279 71
Galway Township Roads:—	
Monck Road	150 00
Bobcaygeon Road	203 20
Reid Road	150 09
Gingras Road, Kirkpatrick	216 10
Gibbons to Crerar Townline	306 94
Herschel Township Roads	401 00
Hastings Road, North of Maynooth	203 73
Hastings Road South of L'Amable	201 63

Name of Work.	Expenditure.
Harvey Township Roads:—	
Section 1 (Montgomery)	50 20
Section 2 (Wier)	130 00
Section 3 (Ingram)	105 50
Section 4 (Graham)	203 00
Hungerford Township Road	200 00
Hagarty, Sherwood, Jones and Burns Roads:—	
Hagarty and Richards, Lots 1 and 6	151 10
Proving Line, Lots 10 and 11, Richards	100 50
Proving Line, 20 and 21, Hagarty	157 25
Wilno and Barry's Bay	254 00
Bloskie's Hill Road	150 00
Sheridan's Hill	110 00
Bark Lake Road, Sherwood and Opeongo Lines	308 00
Hebert Roads:—	
Hebert Section	300 07
2nd Section (Murphy)	200 67
Haddon and Martland Township Boundary Road	296 59
Kingston and Perth Roads near Bedford Mills	151 00
Kingston and Perth Roads near Westport	150 00
Kirkpatrick and McPherson Boundary Road	398 98
L'Amable and Fort Stewart Road	301 10
Lanark 10th Line Road	200 60
Larocque Road	301 14
Lacroix Roads:—	
Bellefluelle Section	499 06
Martin Section	516 52
Begin Section	504 58
Labrosse Road	400 10
Leduc Road	411 46
Lacasse Road	299 31
Laxton and Digby Roads:—	
Monck Road from 4th Concession, Laxton	150 80
Monck Road from Victoria	152 38
Loboro, 7 Concession Road	199 31
Lasswade Road	99 20
Maynooth and Madawaska Road	203 05
Madawaska and Hastings Roads:—	
Concession 2, Lot 18	249 50
Concession 13, Lot 26	149 92
Mattawan Township Roads:—	
Concession from Lot 32	101 00
Les Erable, Lot 35	146 58
Concession 8 from Lot 8	150 00
Mattawa and Pembroke Roads:—	
Lot 6, in Tara Township	200 45
Concession 8, Lots 15 and 16	198 75
Lot 4 East	200 00
Mattawa and Bonfield Roads:—	
East from Calvin Siding	200 50
Concession 15, Lots 28 and 29 in Papineau	100 25
Mara Township Road, Conditional	198 51
Methuen Road	100 25
Martland and Cosby Roads:—	
South from Cosby Bridge	192 00
North Boundary	500 00
Mason and Scollard Road	300 16
McPherson Township Roads:—	
1st Section (St. George)	400 00
2nd Section (Arbour)	401 74
Minden, Anson and Lutterworth Roads:—	
Bobcaygeon 2nd Concession in Lutterworth	96 00
Portage Road Minden, Concession 6	100 00
Lutterworth, Concession 3, Lot 10	300 00
North Shore Road, Minden	100 00
Bobcaygeon Road from Minden	100 00
River Road in Anson	150 00
Gelert and Minden Road	149 47

Name of Work.	Expenditure.
Monmouth and Cardiff Roads:—	
Monck Road, Monmouth	300 00
Haliburton Road, Monmouth	100 00
Cardiff, 19 Concession	100 00
Lot 28 East to Hastings Boundary	300 33
North Crosby and Perth Road	206 50
New Boyne School House Road	200 50
Oso and Clarendon Road	399 93
Peterson Roads:—	
Oram Section	199 11
Card Section	199 90
Pakenham, 12 Line Road	401 90
Pigeon Creek Road	200 25
Piquette Road	200 00
Papineau Township Roads:—	
From Lot 18, Papineau East	150 00
5 Side Line to Concession 9	200 50
Concessions 11 and 12	50 00
10 Side Line from Concession 11	200 21
Concession 12, Lot 15 East	149 99
25 Side Line through Concession 8	199 99
Lot 6, Concession 8 Bridge	49 95
Concession 10, Lot 18 West	200 00
Raglan and Radcliffe Township Roads:—	
1st Section, 10th Line and 18th Line	200 00
Palmer Rapids and Jewelville Roads	304 20
Ritchie Road	200 25
Ramsay Road, Concessions 1 and 2	197 50
Road—Westport to Sherbrooke	198 09
River Valley Road	414 97
Snow Road	217 87
Swamp Road	199 71
Scotch Corners Road in Beckwith	200 20
Sebastapol Roads:—	
Sebastapol and Quadville	207 06
Lake Clear and Mountain Road	220 05
Smoky Falls and Field Roads:—	
Simpson Section	249 59
Danis Section	148 12
Sturgeon River Road, North	399 85
Sturgeon River Road, South	529 84
Smoky Falls Road	498 68
Summerville-Bexley Roads:—	
Burnt River Road	208 50
Burnt River Road from Lot 22	198 00
Bobcaygeon Road between 7 and 8	101 50
Cameron Road in Bexley	150 20
Cameron Road Bexley, Lot 21	150 00
Snowden and Glamorgan Roads:—	
Bobcaygeon Road from Snowden Boundary	100 25
Gelert and Minden Road	99 55
Buckhorn Road in Glamorgan	399 87
Monck Road, Lots 18 and 20	100 00
Minden Road	99 99
Stanhope, Hindon and Sherbourne Roads:—	
Bobcaygeon Road in Sherbourne	320 05
Peterson Road in Stanhope	200 00
Stanhope, Concession 2	99 25
Third Line, Bathurst Road	90 00
Victoria Roads	400 50
Veuve River Bridge Road	587 15
Wilkinson and Carmanville Road	197 49
Warren and Hugel Roads	498 92
Warren and Crerar Roads	501 07
Inspection	5,321 95
Belmont and Methuen By-law No. 491	600 00
Douro By-law No. 7[illegible]	752 48
Dummer By-law No. 742	286 02

Name of Work.	Expenditure.
Ross Township By-law No. 270	1,000 00
Westmeath By-law No. 15	800 00
Elzevir and Grimesthorpe By-law No. 282	500 00
Faraday By-law No. 5	150 00
Limerick By-law No. —	300 00
Madoc Municipality By-law No. 312	499 60
Marmora and Lake By-law No. —	250 00
Wollaston Township By-law No. 9	499 99
Tudor and Cashel By-law No. 10	500 00
Olden By-law No. 9 B	407 50
Portland By-law No. 504	300 00
Casimir, Jennings and Appleby No. 29	512 25
Caldwell By-law No. 112	1,173 50
Martland By-law No. 30	666 66
Ratter and Dunnett No. 53	1,000 00
Springer Municipality By-law No. 256	1,500 00
Harvey Township By-law Nos. 300 and 301	275 00
Dysart Township By-law No. 498	600 00
Dysart Township By-law No. 485 of 1909	1,000 00
Widdifield Township By-law No. 178	1,775 00
	$73,254 75

Temiskaming District.

Name of Work.	Expenditure.
Armstrong, Concession 2 across Lots 9 and 10, Road	200 00
Buck, Concession 5, Lot 4, Road	97 50
Brethour, Concessions 1, 2 and 3, Road	800 18
Brethour Road and Bridge	35 00
Beauchamp and Armstrong Townline, South	499 99
Beauchamp and Armstrong Townline, North	499 80
Brethour Drain between Concessions 1 and 2	601 36
Cane Township Roads	1,000 00
Chris Dall's Road	112 25
Catharine Township, South Townline	993 05
Charlton and Englehart Road	998 02
Casey Mine Road	499 93
Dane Station Road	500 37
Dack and Evanturel Boundary Road	500 05
Dack, Concessions 3 and 4, Road	401 91
Evanturel and Ingram Townline	998 95
Grading and repairing old roads	1,504 75
Grills, Eplett & Taylor accounts, 1909	224 21
Henwood and Kerns Townline	1,000 01
Hilliardton to North Road in Hilliard	800 15
Harris and Casey Townline	999 49
Ingram, Concessions 3 and 4, Road	1,002 75
Ingram South Townline Road	1,000 00
Kerns and Harley Townline Road	975 00
Larder Lake Road	700 00
Lundy, between Concessions 2 and 3, Road	503 02
Buck By-law No. 104	1,499 43
Casey By-law No. 1	199 50
Casey By-law No. 2	249 62
Casey By-law No. 3	494 75
Coleman By-law No. 85, 1909	333 33
Coleman By-law No. 99	10,301 17
Dack Township By-law No. 1911	550 00
Dymond Township By-law No. 56	1,980 91
Evanturel By-law No. 66	1,293 60
Harley By-law No. 50 of 1909	1,600 00
Harley By-law No. 71	959 07
Harley By-law No. 74	270 00
Hudson By-law No. 11	1,500 00
Kerns By-law No. 70	1,901 05
Marter Bridge Road	998 95
Mountain Chute to Elk Lake Road	3,013 60

Name of Work.	Expenditure.
Mattawapika River Bridge	299 50
Mud Lake Road to Mileage 156	1,499 75
North Boundary of Robillard	1,000 59
Pacaud South Boundary Road	1,000 70
Savard and Chamberlain Townline Roads	1,007 54
Savard 2 and 3 West Road	305 75
South Lorrain Roads	4,992 76
Tremblay account, Elk Lake Road, 1909	581 00
Inspection—Temiskaming	2,670 25
	$57,150 45

TRUNK ROADS.

Charltou and Elk Lake Road	$33,760 16
Elk Lake to Gowganda Road:—	
Contract, 1909	9,722 99
Bridges, Contract, 1909	5,137 16
Grading and renewing	30,134 48
James Township Road	1,048 55
Matheson to Night Hawk Lake	16,860 80
Glackmeyer, 18 and 19 Road	690 00
Glackmeyer and Clute Roads	941 34
Cochrane 24 and 25 Road	4,994 39
Glackmeyer, 2 and 3 Road	2,964 49
Clute, 12 and 13 Road	2,511 00
Silver Lake Road, 1909 Contract	520 00
Cobalt and Haileybury Road	2,936 23
Matheson to Munro Mines, Balance of 1909	297 04
B. & W. Contract, 1909	2,133 00
Grading, 1910	3,443 28
Road Machinery	1,650 38
Mileage 222 to Frederick House Lake	7,522 22
Night Hawk Lake to Porcupine	6,821 05
Advertising Contracts	57 30
	$134,145 86

RECAPITULATION.

North Division	$161,221 12
West Division	26,973 15
East Division	73,254 75
Temiskaming District	57,150 45
Trunk Roads	134,145 86
Total	$452,745 33

I have the honour to be,

Sir,

Your obedient servant,

M. P. DOHERTY,

Accountant, Colonization Roads.

DEPARTMENT OF PUBLIC WORKS, TORONTO,

January, 1911.

STATEMENTS

OF THE

ACCOUNTANT

AND

LAW CLERK.

Department of Public Works, Ontario.
Toronto, February, 1911.

HON. J. O. REAUME,
Minister of Public Works, Ontario.

SIR,—I have the honour to submit the following statements of capital expenditure on public buildings, works, roads, aid to railways, etc., and of contracts entered into in connection therewith, being: (1) The capital expenditure for public buildings and public works, etc., for 12 months to the 31st of October, 1910, (2) the total capital expenditure on public buildings, public works, colonization and mining roads, aid to railways, etc., from the 1st of July, 1867, to the 31st of October, 1910, (3) a classified statement showing (*a*) the expenditure from the 1st of July, 1867, to the 31st of December, 1904; (*b*) the expenditure from the 1st of January, 1905, to the 31st of October, 1910; and (*c*) the grand total of expenditure from the 1st of July, 1867, to the 31st of October, 1910, and (4) a statement showing the several contracts and bonds entered into with His Majesty during the 12 months ending the 31st of October, 1910, for the carrying out of the sundry works under the control of your Department.

I have the honour to be,

Sir,

Your obedient servant,

J. P. EDWARDS,

Accountant, etc.

STATEMENT No 1.

Being Statement of Expenditures on Capital Account, Public Buildings and Public Works, for the year ending October 31st, 1910. (See also Statement No. 2.)

Name of Work.	—	Amount.
PUBLIC BUILDINGS—	$ c.	$ c.
New addition to Parliament Buildings		121,232 24
Reconstruction of Parliament Buildings, West Wing	139,613 64	
" " (per special warrant)	9,907 01	
		149,520 65
Government House, new		90,670 50
Osgoode Hall, Toronto	12,447 01	
" addition to Centre Building	28,047 39	
		40,494 40
Hospital for the Insane, Brockville		15,404 54
" Cobourg		2,562 98
" Hamilton		16,777 29
" Kingston		21,403 81
" London		10,389 58
" Mimico		18,718 97
" Penetanguishene		9,511 85
" Toronto		7,667 03
" Feeble Minded, Orillia		5,368 08
" Epileptics, Woodstock	4,470 49	
" (Barn, per S. Wt.)	631 32	
		5,101 81
Central Prison, Toronto		2,648 51
New Provincial Prison, Guelph		174,528 87
Reformatory for Females, Toronto		4,753 19
Normal and Model Schools, Toronto		11,565 26
" Ottawa		1,196 80
Normal School, London		187 00
" Hamilton		109 55
" Peterborough		1,610 53
" Stratford		1,016 44
" North Bay	3,736 27	
" (Completion of Contract)	2,864 35	
		6,600 62
Institution for the Deaf and Dumb, Belleville		2,802 99
" Blind, Brantford		9,747 37
Ontario Agricultural College, Guelph		2,904 31
Eastern Dairy School		3,492 23
Experimental Fruit Farm, Jordan Harbour		393 48
Winter Fair Building, Guelph		1,000 00
Hygienic Building, London		6,898 15
Children's Shelter, Toronto	803 23	
" (for 1909, omitted from statement)	997 11	
		1,800 34
Government Buildings, London, Eng.		2,000 00
New Comers' Inn, Peter Street, Toronto		445 71
Muskoka District:		
Court House, Lockup and Registry Office, Bracebridge		497 79
Nipissing District:		
Court House, Gaol, etc.	4,063 03	
Registry Office, etc.	391 88	
Gaol, Gowganda	141 85	
Lockup, Cochrane	1,000 00	
" Porcupine (S. Wt.)	2,671 18	
		8,267 94
Parry Sound District:		
Registry Office, Land Titles' Office, Court-room, Lockup, etc., Parry Sound		257 10

STATEMENT No. 1.—Continued.

Name of Work.	—	Amount.
	$ c.	$ c.
Manitoulin District:		
Court House, Gaol, etc., Gore Bay		251 92
Sudbury District:		
Court House, Gaol and Registry Office	2,207 49	
Lockup at Matheson (S. Wt.)	1,263 86	
		3,471 35
Algoma District (Sault Ste. Marie):		
Court House, Registry Office, etc	331 38	
Lockup at Blind River	600 00	
		931 38
Rainy River District:		
Court House, Gaol and Registry Office, Fort Francis	816 26	
Lockup, Atikokan	5 00	
		821 26
Thunder Bay District:		
Court House, Lockup and Registry Office, Port Arthur		2,090 84
Kenora District:		
Court House, Gaol, etc	51 13	
Lands and Titles Office	575 00	
New Court House	30,435 72	
		31,061 85
PUBLIC WORKS—		
Black Sturgeon Bridge		1,719 10
Bonfield Creek, Improving		449 35
Black River Bridge, Matheson		2,420 84
Black Creek Bridge, Dalton		2,418 95
Burnt River Bridge		2,770 23
Birch Creek Bridge		5,298 76
Bala Dam and Moon Chute		2,544 51
Cardwell and Baxter Bridges, etc		2,108 64
Dickson Creek Bridge		320 62
Dorset Bridge (Lake of Bays Navigation Co.)		197 00
Dog Lake Dam		19,631 33
Eau Claire Bridge		2,660 28
Equipment, Instruments and Machinery		2,525 11
Faulkner Bridge		302 50
Filiatrault Bridge		694 92
Hoc Roc Bridge		1,117 66
Hoeffler Bridge		2,203 28
Laird Bridge		799 46
La Grasse River Bridge		1,500 00
Madawaska River Bridge		999 89
Munro's Rapids, Removing obstructions		400 00
Magnetawan River Bridge		2,317 16
Mattawatchin River Bridge		3,474 89
Mississippi River, Removing obstructions		929 72
Maintenance Locks, Dams, Bridges, etc		29,867 13
Nottawassaga River, Breakwater		500 00
Oxdrift Bridge		656 90
Overhead Bridges, Soo Branch, C.P. Ry		5,581 33
Root River Bridge		2,481 50
Rydal Bank Bridge		8,568 71
Running Creek, Dredging		1,500 00
St. Joseph's Township Bridge		499 71
Sucker Creek, Improving		498 90
Salter and Victoria Bridges		499 38
Saugeen River Bridge		900 00
South River Bridge, Nipissing		5,498 02

STATEMENT No. 1.—Concluded.

Name of Work.	—	Amount.
	$ c.	$ c.
Spanish River Bridge, Nairn		3,064 75
Surveys, Inspections, Arbitrations, etc		2,060 59
Tunnel Bridge		5,236 35
Thessalon Road (Horse killed)		225 00
Veuve River Bridge		997 95
Vermilion River Bridge		4,532 08
Wissi-Wassa Bridge		1,693 78
Winnipeg River Bridge		6,152 36
Wahnapitae Log Canal		451 51
DRAINAGE WORKS—		
Eldon Township Drainage	750 00	
Burnet Drain, Elma Township	750 00	
Enniskillen and Dawn	1,000 00	
Aux, Raisin River (Osnabruck)	3,000 00	
Pelee Island Drainage	2,000 00	
Ruscombe River, Rochester Township	800 00	
Little River, Sandwich East, Township	2,000 00	
		10,300 00
Total		949,206 66

Department of Public Works, Ontario.
Toronto, February, 1911.

J. P. EDWARDS,
Accountant,
Public Works.

STATEMENT No. 2.

Being a statement of expenditures on Capital Account for Public Buildings, Public Works, Colonization and Mining Roads, Aid to Railways, etc., as follows:—(1) The total expenditure from the 1st of July, 1867, to the 31st of October, 1909; (2) The expenditure for the twelve months ending the 31st of October, 1910: and (3) The grand total of expenditure from the 1st of July, 1867, to the 31st of October, 1910.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure to 31st Oct. 1910.	Total Expenditure to 31st Oct., 1910.
PUBLIC BUILDINGS—	$ c.	$ c.	$ c.
Government House	183,860 86	.....	183,860 86
New Government House	.....	90,670 50	90,670 50
Old Parliament and Departmental Buildings	85,285 98	.....	85,285 98
New Parliament and Departmental Buildings (Construction Account)	1,282,679 04	.....	1,282,679 04
New Parliament and Departmental Buildings (equipment, grounds, roads, plant house, etc.)	230,934 62	.....	230,934 62
New Parliament Buildings, addition for Library and Offices	15,311 06	121,232 24	136,543 10
New Parliament Buildings, reconstruction of West Wing (recently destroyed by fire)	4,119 61	149,520 65	153,640 26
Hospital for Insane, Toronto	428,288 17	7,667 03	435,955 20
" Mimico	708,708 21	18,718 97	727,427 18
" London	1,116,024 33	10,389 58	1,126,413 91
" Hamilton	1,014,075 38	16,777 29	1,030,852 67
" Kingston	586,510 61	21,403 81	607,914 42
" Brockville	568,668 45	15,404 54	584,072 99
" Cobourg	134,091 18	2,562 98	136,654 16
" Penetanguishene	122,537 02	9,511 85	132,048 87
Hospital for Epileptics, Woodstock	231,694 77	5,101 81	236,796 58
" Idiots, Orillia	588,129 30	5,368 08	593,497 38
Central Prison, Toronto	950,328 27	2,648 51	952,976 78
New Provincial Prison, Guelph	.....	174,528 87	174,528 87
Andrew Mercer Reformatory for Females, Toronto	273,593 87	4,753 19	278,347 06
Reformatory for Boys, Penetanguishene	191,512 00	.....	191,512 00
Institution for Deaf and Dumb, Belleville	354,615 96	2,802 99	357,418 95
Institution for Blind, Brantford	309,039 24	9,747 37	318,786 61
Education Department and Normal and Model Schools, Toronto	257,044 71	11,565 26	268,609 97
Normal and Model Schools, Ottawa	263,722 90	1,196 80	264,919 70
Normal School, London	119,515 23	187 00	119,702 23
Normal Schools, additional (four in all)	4,618 33	.....	4,618 33
" Stratford	81,960 96	1,016 44	82,977 40
" Hamilton	86,369 62	109 55	86,479 17
" Peterborough	88,457 43	1,610 53	90,067 96
" North Bay	91,280 18	6,600 62	97,880 80
Normal College, Hamilton (equipment Domestic Science Room)	854 25	.....	854 25
School of Practical Science (College of Technology)	59,100 26	.....	59,100 26
School of Practical Science, Queen's Park	252,535 56	.....	252,535 56
School of Practical Science, New Chemistry and Milling and Mining Building	448,213 15	.....	448,213 15
Agricultural College, Guelph	806,428 62	2,904 31	809,332 93
Fruit Experimental Station, Jordon Harbour	31,178 38	393 48	31,571 86
Dairy School, Strathroy	14,583 71	.....	14,583 71

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure to 31st Oct. 1910.	Total Expenditure to 31st Oct., 1910.
PUBLIC BUILDINGS—*Continued.*	$ c.	$ c.	$ c.
Dairy School, Kingston	19,722 18	3,492 23	23,214 41
Children's Shelter, Toronto	7,012 35	1,800 34	8,812 69
School of Mining, Kingston	4,070 00	.....	4,070 00
Osgoode Hall, Toronto	215,072 38	12,447 01	227,519 39
" " Addition to Centre Building	.....	28,047 39	28,047 39
Immigration House, Toronto	5,781 22	445 71	6,226 93
Agricultural Hall	324 00	.....	324 00
Government Farm, Mimico	51,646 34	.....	51,646 34
Pioneer Dairy Farm, Algoma	5,178 43	.....	5,178 43
Brock's Monument, Queenston Heights	4,605 31	.....	4,605 31
Niagara River Fence	8,025 43	.....	8,025 43
Winter Fair Building, Guelph	24,101 25	1,000 00	25,101 25
Hygienic Institution, London	42,099 26	6,898 15	48,997 41
Government Building, London, Eng.	.....	2,000 00	2,000 00
ALGOMA DISTRICT—			
Court House, Gaol and Registry Office, etc., Sault Ste. Marie	32,611 17	331 38	32,944 55
Grand Manitoulin Island, three lockups (Gore Bay, Little Current and Manitowaning)	22,287 60	.....	22,287 60
Addition to Registry Office, Sault Ste. Marie.	11,658 02	.....	11,658 02
Lockup, Killarney	1,298 97	.....	1,298 97
" Bruce Mines	3,117 48	.....	3,117 48
" Webbwood	1,749 15	.....	1,749 15
" Thessalon	2,221 99	.....	2,221 99
" Massey	702 74	.....	702 74
" Blind River	2,042 87	600 00	2,642 87
" Chapleau	1,126 49	.....	1,126 49
" Wawa	1,330 16	.....	1,330 16
" Cutler	864 70	.....	864 70
" Chelmsford	511 90	.....	511 90
" Nairn	300 00	.....	300 00
" Echo Bay	500 00	.....	500 00
MANITOULIN DISTRICT—			
Gaol, etc., Gore Bay	7,670 89	251 92	7,922 81
Lockup, Manitowaning	327 24	.....	327 24
THUNDER BAY DISTRICT—			
Registry Office and Lockup, Court House, etc., Port Arthur	65,261 31	2,090 84	67,352 15
Lockup at Fort William	9,723 90	.....	9,723 90
" Silver Islet, Lake Superior	2,304 79	.....	2,304 79
" Nepigon	1,279 23	.....	1,279 23
" Schreiber (new)	700 00	.....	700 00
MUSKOKA DISTRICT—			
Immigration Sheds at Gravenhurst	355 00	.....	355 00
Registry Office and Lockup at Bracebridge	33,405 80	497 79	33,903 59
Lockup and Court Room at Huntsville	8,364 85	.....	8,364 85
Lockup and Court Room at Bayside	300 00	.....	300 00

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1907, to 31st Oct., 1909.	Expenditure to 31st Oct. 1910.	Total Expenditure, to 31st October, 1910.
PUBLIC BUILDINGS—*Continued.*	$ c.	$ c.	$ c.
PARRY SOUND DISTRICT—			
Registry Office, Lockup and Court Room, House for Gaoler, Land Titles Office, etc., Parry Sound	46,767 14	257 10	77,024 24
Lockup at Magnetawan	645 56	.....	645 56
Lockup and Court Room at Burk's Falls	6,621 96	.....	6,621 96
Lockup at French River	1,198 62	.....	1,198 62
" Dunchurch	609 00	.....	609 00
" Emsdale	300 00	.....	300 00
" Byng Inlet	1,232 35	.....	1,232 35
Lockup at South River	500 00	.....	500 00
" Powassan	1,250 00	.....	1,250 00
" Calendar	500 00	.....	500 00
NIPISSING DISTRICT—			
Lockup at Mattawa	14,949 19	.....	14,949 19
Lockup, Court Room and Registry Office, and Gaoler's House, North Bay	42,003 74	4,454 91	46,458 65
Lockup at Sudbury	12,595 48	.....	12,595 48
" Sturgeon Falls	2,266 28	.....	2,266 28
" New Liskeard	657 00	.....	657 00
" Warren	600 00	.....	600 00
" Bonfield	694 67	.....	694 67
" Cobalt	4,728 39	.....	4,728 39
" Markstay	600 00	.....	600 00
" Englehart	975 00	.....	975 00
" Cachè Bay	500 00	.....	500 00
" Gowganda	2,938 57	141 85	3,080 42
" Cochrane	.....	1,000 00	1,000 00
" Porcupine	.....	2,671 18	2,671 18
RAINY RIVER DISTRICT—			
Lockup, Court Room and Gaoler's Residence, New Registry Office, etc., Rat Portage (Kenora)	37,007 67	.....	37,007 67
Registry Office, Fort Frances	998 91	816 26	1,815 17
New Gaol, etc., at Fort Frances	11,443 17	.....	11,443 17
Lockup at Fort Frances	6,237 86	.....	6,237 86
" Mines Centre	1,205 48	.....	1,205 48
" Emo	1,888 94	.....	1,188 94
" Atikokan	1,566 31	5 00	1,571 31
" Beaver Mills	1,840 71	.....	1,840 71
" Dryden	521 00	.....	521 00
KENORA DISTRICT—			
Court House and Gaol, etc.	89 25	51 13	140 38
Registry Office	412 65	.....	412 65
New Court House	6,102 65	30,435 72	36,538 37
Lands Titles Office	.....	575 00	575 00
SUDBURY DISTRICT—			
Court House and Gaol and Registry Office, Sudbury	73,879 66	2,207 49	76,087 15
Lockup at Matheson	.....	1,263 86	1,263 86
COUNTY OF HALIBURTON—			
Registry Office at Minden	5,918 42	.....	5,918 42

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st October, 1910.
PUBLIC WORKS	$ c.	$ c.	$ c.
Young's Point Lock	31,192 72	.....	31,192 72
Balsam and Cameron Lakes Locks	23,959 02	.....	23,959 02
Mary's and Fairy Lakes Lock Works and Bridge over Muskoka River at Huntsville	80,438 37	.. ..	80,438 37
Mary's and Fairy Lakes Lock Works to renew high bridge above lock over Muskoka River, and renew cribbing above and below locks	8,389 39	.....	8,389 39
Magnetawan Works, lock, swing bridge, dam and river improvements; dam and slide, Deer Lake; swing bridge, Township of Ryerson; dredging Burk's Falls; and removing obstructions, Ah-Mic Lake...	74,461 10	2,317 16	76,778 26
High Falls, Pigeon River, slide, dam, etc. (C.L.D.)	9,706 07	.....	9,706 07
Georgian Bay Works	7,149 97	.....	7,149 97
Landing Pier at Port Elgin	2,750 00	.....	2,750 00
Landing Pier at Southampton	2,022 63	.....	2,022 63
Docks at Southampton, Saugeen River	1,739 04	.....	1,739 04
Docks on the Rainy River	3,163 44	....	3,163 44
Docks (landing) at Beaudraul's Wabigoon.	777 95	.....	777 95
Muskoka Lake Works	21,915 30	.....	21,915 30
" lock, bridges and dredging at Port Carling	64,683 45	....	64,683 45
" cut and bridge at Port Sandfield	20,336 05	.....	20,336 05
" Muskoka Falls, works and bridges at Bala	20,667 19	2,544 51	23,211 70
" Joseph River Works, less contribution..	486 87	.....	486 87
" Kemp's Channel improvements	4,238 69	.....	4,238 69
" piers and boom, Jeannette's Channel ..	1,660 75	.....	1,660 75
Nipissing Lake Works	9,182 17	.....	9,182 17
Couchiching Lake Works	427 82	.....	427 82
Mud Lake Works (Township of Dalton) ..	1,502 32	.....	1,502 32
Kushog Lake Dam	300 00	. .....	300 00
Mississicua Lake Dam	4,989 84	.....	4,989 84
Star Lake Works	412 22	.....	412 22
Manitou Lake Works, dam at outlet, etc., Rainy River District	2,794 14	.....	2,794 14
Inkerman Dam, removal of, County Dundas.	1,000 00	.....	1,000 00
Bottle Lake Dam and Mississicua Creek Dam	4,068 72	.....	4,068 72
Shoal Lake and Lake of the Woods Improvements, Ash Rapids	5,998 25	.....	5,998 25
Mill Creek Improvements (County Prescott)	1,000 00	.....	1,000 00
Lake of Bays, dredging mouth of river at outlet of	581 82	.....	581 82
Peninsula Creek Improvements, bridges, cribbing, etc.	37,295 66	.....	37,295 66
Stony Creek Works (Township of Ops) ...	4,828 25	.....	4,828 25
Union Creek Improvements	1,050 63	.....	1,050 63
Bear Creek, dam and slide	1,617 52	.....	1,617 52
Lake Scugog Works, dredging at Port Perry	977 53	....	977 53
Lake Scugog Flats Road	1,500 00	.....	1,500 00
Neighick Lake, dredging at entrance to ..	898 15	.....	898 15

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st October, 1910.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c.
La Vase and Boon Creeks, improvements to.	804 22	.....	804 22
Cobb's Lake Outlet	1,102 08	.....	1,102 08
Gull and Burnt River Works, dams, slides and bridges, etc.	100,716 60	.....	100,716 60
Muskoka River Works	42,670 53	.....	42,670 53
" Bridge at South Falls	1,000 00	.....	1,000 00
" " Port Sydney	1,000 00	.....	1,000 00
Sydenham River Works	2,156 26	.....	2,156 26
Nottawasaga River Works	8,770 83	500 00	9,270 83
Kaministiquia River Works	22,865 02	.....	22,865 02
Scugog River Works (including Lindsay lock and swing bridges)	97,897 38	.....	97,897 38
Pigeon River Works (County of Victoria)..	4,999 62	.....	4,999 62
Otonabee River Works	9,162 91	.....	9,162 91
Balsam River Works	16,585 11	.....	16,585 11
Wye River Works	5,176 98	.....	5,176 98
Squaw River Works	1,688 16	.....	1,688 16
Moose River Works (County of Stormont)..	1,000 00	.....	1,000 00
Black River Works (Lake Simcoe)	3,136 10	.....	3,136 10
Jean Baptiste River, construction of bridge over (Township of Beauchamp)	2,850 00	.....	2,850 00
Mattawa River Works and Bridge	22,094 02	.....	22.094 02
Wabis River Works (Townships Dymond, Harris and Kearns)	1,340 51	.....	1,340 51
Wabis River Bridges	2,773 33	.....	2,773 33
New Liskeard Bridge, over Wabis River ..	4,000 00	.....	4,000 00
Wabis Creek, to construct bridge over.....	1,760 08	.....	1,760 08
Squaw River Works, dam at Harvey	581 56	.....	581 56
Indian River Works, deepening, Townships Sarawak and Keppell	1,850 82	.....	1,850 82
Whitefish River, removing obstructions	249 15	.....	249 15
North and Black Rivers, removing obstructions	4,535 13	.....	4,535 13
Bar River, Township of McDonald, removing obstructions	130 55	.....	130 55
Cassimer River, removing obstructions	205 56	.....	205 56
McKenzie Creek, improvements	200 35	.....	200 35
Snake River, improvements	140 65	.....	140 65
Madawaska River, swing bridge at Combermere; bridge Burston and bridge Township of Raglan	12,171 43	.....	12,171 43
Madawaska River, bridge near Arnprior ...	3,000 00	.....	3,000 00
Nation River Works, bridge, etc.	15,877 23	.....	15,877 23
Nation River, contribution	4,000 00	.....	4,000 00
Petewawa River Bridge	3,879 25	.....	3,879 25
Sturgeon River Bridge, Township of Field..	3,616 08	.....	3,616 08
Sturgeon River Bridge, Township of Gibbons	2,610 35	.....	2,610 35
To construct steel bridge at outlet Lake of the Woods, at Rat Portage (Kenora) ...	26,455 82	.....	26,455 82
Rainy River Road Bridge	4,429 84	.....	4,429 84
Stanley Bridge Thunder Bay District	8,136 09	.....	8,136 09
Blind River Bridge	2,772 34	.....	2,772 34
Buck Lake Bridge, to rebuild	305 06	.....	305 06
Black River Bridge, to rebuild, Township of Draper, Muskoka	509 48	.....	509 48
To rebuild bridges in Frontenac, destroyed by fires; Clyde River, Mud Lake and Concession 1st, Clarendon	3,288 06	.....	3,288 06
Kinmount Bridge	1,500 00	.....	1,500 00

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Dxpenditure 1909-10 to 31st Oct.	Total Expenditure to 31st Oct., 1910.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c.
Gooderham and Kinmount Bridges	3,876 79		3,876 79
Otter Creek Bridge at Copp's Falls	426 32		426 32
Embankment along River in Dover Township	500 00		500 00
Bridge over Jean Baptiste, Township of Armstrong	98 31		98 31
Round Lake Road Bridges	2,301 90		2,301 90
Baysville Bridge	2,047 50		2,047 50
Calabogie Bridge, Township of Bagot	1,800 00		1,800 00
Echo River Bridge	1,332 11		1,332 11
Wasdale Bridge Ontario and Simcoe	1,000 00		1,000 00
Wahnapitae River Bridge and approaches	4,642 49		4,642 49
Delta Creek improvements	99 24		99 24
Bridge over West Arm, Lake Nipissing	11,260 08		11,260 08
Wolsley River Bridge, Township of Mattawa	974 20		974 20
Black Sturgeon Bridge	1,179 10		1,179 10
Bonfield Creek, Improving, Bonfield	449 35		449 35
Black River Bridge, Matheson Township	2,420 84		2,420 84
Birch Creek Bridge	5,298 76		5,298 76
Cardwell and Baxter Bridges	2,108 64		2,108 64
Faulkner Bridge	302 50		302 50
Hoeffler Bridge	2,203 28		2,203 28
Laird Bridge	799 46		799 46
La Grasse Bridge	1,500 00		1,500 00
Oxdrift Bridge	656 90		656 90
Overhead Bridges, Soo Branch C.P.R.	5,581 33		5,581 33
Root River Bridge	2,481 50		2,481 50
Rydal Bank Bridge	8,568 71		8,568 71
Running Creek, Dredging	1,500 00		1,500 00
Sucker Creek, improving, Mara Township	498 90		498 90
Salter and Victoria Bridges	499 38		499 38
Saugeen River Bridge, Bentinck Township	900 00		900 00
South River Bridge, Nipissing Township	5,498 02		5,498 02
Bridge over Sunday Creek	603 00		603 00
Bridge over La Blanche River	2,929 87		2,929 87
La Blanche Bridge, Tomstown	6,326 68		6,326 68
La Blanche River Bridge and approaches, Casey Township	5,817 72		5,817 72
Severn Bridge, Township of Morrison	3,350 00		3,350 00
Seguin River Bridge	3,754 00		3,754 00
Bridge on Wawa Road	1,198 39		1,198 39
Black Bridge, Muskoka, construction of	1,500 00		1,500 00
Gannon's Narrows Bridge, construction	1,000 00		1,000 00
Chemong Lake Bridge	3,500 00		3,500 00
Veuve River Bridge, Township of Dunnette	918 70		918 70
Veuve River Bridge, Township of Verner	5,719 38		5,719 38
Bridge over Wright's Creek, Township of Casey	1,813 35		1,813 35
Reflooring Bridge at Pine Wood, Rainy River District	375 00		375 00
White River Bridge, Pecaud Boundary	2,198 21		2,198 21
White River Bridge and approaches, Marter Township	3,185 45		3,185 45
Bridge at Eau Claire	2,686 39	2,660 28	5,346 67
Wabigoon Bridge	2,892 79		2,892 79
Thessalon and Larchwood Bridges	7,769 69		7,769 69
Mississauga River Bridge, Thompson Township	24,593 87		24,593 87
Espinola Bridge	17,980 23		17,980 23
Oxtongue Bridge	1,058 26		1,058 26

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st Oct., 1910.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c
Port Severn, Axe Lake and Cooper Bridges.	1,427 41	.....	1,427 41
Housey's Rapids Bridge	3,565 03	.....	3,565 03
Draper Bridge	500 00	.....	500 00
Still River Bridge, Byng Inlet	918 60	.....	918 60
Kearney Bridge	6,798 82	.....	6,798 82
Himsworth Bridges	806 29	.....	806 29
Mississippi, Grant, McKenzie and Egan Bridges	2,125 26	.....	2,125 26
Minden Bridge	4,740 68	.....	4,740 68
Bracebridge Bridge	7,000 00	.....	7,000 00
Bridge over Portage Bay, Keewatin	5,009 50	.....	5,009 50
Martland Township Bridge	1,192 90	.....	1,192 90
Bridge at Raysville, Townships McLean and Ridout	900 00	.....	900 00
Maskinonge Creek, Township of Cassimer, removing obstructions	499 92	.....	499 92
South River and Eagle Lake Bridges, Township of Machar	1,295 87	.....	1,295 87
McCarthy Creek Bridges, Township of Gibbons	300 00	.....	300 00
Powassan Bridge	300 00	.....	300 00
Payne River Bridge, Township of Finch....	2,500 00	.....	2,500 00
Berriedale Bridge, Township of Armour ...	935 77	.....	935 77
Hoodstown Road Bridge, Township of Chaffey	1,200 00	.....	1,200 00
Hoodstown Road Bridge, over Big East River	800 00	.....	800 00
Big East River Bridge	5,596 03	.....	5,596 03
Maple Island Bridge, Magnetawan River, Township of McKenzie	993 32	.....	993 32
Sleeman's Bridge and approaches	1,044 80	.....	1,044 80
Goulais River Bridge	7,448 51	.....	7,448 51
Sauble River Bridge, Massey	12,708 20	.....	12,708 20
Spanish River Bridge and approaches, Webbwood	18,364 73	.....	18,364 23
Spanish River, Massey Bridge	28,723 08	.....	28,723 08
Vermilion River Bridge, Township of Hanmer	662 75	.....	662 75
North Road Bridge, Township of Dymond..	1,877 24	.....	1,877 24
Whitestone Bridge, McKenzie Township	1,395 22	.....	1,395 22
Manitowaba Bridge, McKellar Township....	798 51	.....	798 51
Canard River Bridge	1,000 00	.....	1,000 00
La Mable Bridge, Dungannon Township	1,271 43	.....	1,271 43
Beaver Creek Bridge, Monk Township	996 77	.....	996 77
Black Duck and Indian River Bridges	869 48	.....	869 48
Axe Creek, Housey's Outlet and Kahshee Bridges	1,221 57	.....	1,221 57
Katrine Bridge, Armour Township	1,257 23	.....	1,257 23
Burnt River Bridge, Township of Snowdon..	2,017 11	.....	2,017 11
Burnt River Bridge (Township Somerville Bridges)	4,930 61	.....	4,930 61
Burnt River Bridge, Buckhorn Road	2,770 23	.....	2,770 23
Thessalon Road, (Horse Killed)	225 00	.....	225 00
Wissi Wassa Bridge, Himsworth Township	1,693 78	.....	1,693 78
Winnipeg River Bridge, Pellat Township.....	6,152 36	.....	6,152 36
Wahnapitae Log Canal	451 51	.....	451 51
Rainy River Bridge	1,996 77	.....	1,996 77
Indian Point Bridge, Manitoulin Island	1,339 96	.....	1,339 96
Beaudette River (to aid in dredging, etc.)..	3,000 00	.....	3,000 00
Mississippi River Improvements (obstructions)	6,413 36	929 72	7,343 08

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909–10 to 31st Oct.	Total Expenditure to 31st October, 1910.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c.
Head River Improvements, Township of Laxton and Cardon	976 82	.....	976 82
Moira River Improvements, Township of Thurlow	2,135 32	.....	2,135 32
Muskrat River Improvements	1,861 98	.....	1,861 98
Payne River Works	4,000 00	.....	4,000 00
Otonabee River Bridge	2,500 00	.....	2,500 00
Trent River Works	2,000 00	.....	2,000 00
Bridge, Township of Cambridge	1,000 00	.....	1,000 00
Indian Point Bridge, Manitou Island	2,596 61	.....	2,596 61
Mississicua River Bridge	4,355 94	.....	4,355 94
Stony Creek Bridge, Ryerson	831 68	.....	831 68
Damage by raising waters, near Rat Portage. (Kenora)	800 00	.....	800 00
Washago and Gravenhurst Road	32,792 12	.....	32,792 12
Washago Wharf	489 22	.....	489 22
Portage du Fort Bridge, Ottawa River	10,747 99	.....	10,747 99
Des Joachims Rapids, bridges and approaches	9,937 72	.....	9,937 72
Surveys, Inspections, Arbitrations, Awards, etc.	57,162 50	2,060 59	59,223 09
Deer Lake Works, dam and slide, Township of Anstruther	1,420 17	.....	1,420 17
Nogies Creek Works	2,144 57	.....	2,144 57
Cashmere Dam, Middlesex (obstructions)	1,144 19	.....	1,144 19
Eagle Lake Works, to construct dam at outlet	1,173 84	.....	1,173 84
Bass Lake Dam, Township Galway, Peterborough	1,000 00	.....	1,000 00
To remove obstacles from navigable streams.	513 02	.....	513 02
Bonnechere River Works	338 50	.....	338 50
Talbot River Works	605 95	.....	605 95
Maintenance and repairs, locks, dams, slides, bridges, etc.	260,515 88	29,867 13	290,373 01
Concrete Mixing Machine	950 00	.....	.....
Equipment, instruments, machinery, etc.	7,153 74	2,525 11	9,678 85
City of St. Thomas, *re* Toll Road, taken over	3,000 00	.....	3,000 00
Township of London, towards purchase Proof Line Toll Road	3,666 00	.....	3,666 00
Clear Creek Bridge, Oxford Township	500 00	.....	500 00
Beeline Bridge, Alice Township	499 63	.....	499 63
Sherbinean Bridge, Hungerford	500 00	.....	500 00
Round Lake Bridge, Hagarty	500 00	.....	500 00
Slate River Bridge, Kaministiquia River	580 14	.....	580 14
Shadow River Bridge, Township Humphrey.	490 90	.....	490 90
Filiatrault Bridge, boundary between Martland and Cosby	699 99	.....	699 99
White Stone Lake Bridge, Parry Sound District	706 40	.....	706 40
Ardoch Bridge, County Frontenac	900 00	.....	900 00
Culls Barry Bay Bridges and Calabogie Bridge	931 48	.....	931 48
Bushkong Lake Bridge, Peterson Road	957 76	.....	957 76
Steidtler Creek Bridge Parry Sound District.	954 47	.....	954 47
Bonnechere River Bridge	1,000 00	.....	1,000 00
Bridge on Town line, between Dymond and Harris	911 28	.....	911 28
Removing obstructions, Black Creek, Townships Monck and Watt	1,480 76	.....	1,480 76
Norland Bridge, Cameron Road	1,354 70	.....	1,354 70
Mud Creek Bridge, Township of Herschell	1,800 00	.....	1,800 00
Veuve River Bridge, Township Kirkpatrick.	541 06	....	541 06

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st October, 1910.
PUBLIC WORKS—*Continued.*	$ c.	$ c.	$ c.
Lake St. John and Sucker Creek, Improving outlet	1,795 56		1,795 56
Hope Township, Towards purchase of Toll Road	2,300 00		2,300 00
Pautois' Creek Bridge, Calvin	2,373 82		2,373 82
Burk's Falls Bridge, Magnetewan River	2,606 14		2,606 14
Englehart Bridge and approaches	2,795 39		2,795 39
Oakley Bridge, Muskoka	4,765 03		4,765 03
Pine River Bridge, Rainy River District	3,241 30		3,241 30
Palmer's Rapids Bridge, Renfrew	4,629 11		4,629 11
Hilliardton Bridge, over White River	5,460 89		5,460 89
Dorset Bridge, Township Dorset	7,424 72	197 00	7,621 72
Veuve River Bridge, Hogarth Township		997 95	997 95
Filiatrault Lake Bridge		694 92	694 92
Mississauga River, Reflooring Iron Bridge over	462 60		462 60
Stephenson Float Bridge	808 15		808 15
Bell's Rapids Bridge, County Renfrew	2,494 79		2,494 79
Dawson Road Bridges	1,480 36		1,480 36
York Branch River Bridge, Township Dungannon	1,910 31		1,910 31
Bridge across Hudson Creek, Township of Kearns	1,792 94		1,792 94
To pay for stock injured by blasting at North River	135 00		135 00
Gratuity to Arthur Brown, injured at Tomstown Bridge	140 00		140 00
Bissetts Creek Bridge, Nipissing District	699 57		699 57
Beaver Creek Bridge, Kenora District	784 68		784 68
Bigwood Bridges, Nipissing District	7,389 80		7,389 80
Brule Creek Bridge	489 85		489 85
Black Creek Bridge, Hinsworth Township	449 33		449 33
Cosby Bridge, Nipissing District	493 85		493 85
Crocodile Creek Bridge, Nipissing District	780 94		780 94
Dickson Creek Bridge, Township of Bucke	1,243 39	320 62	1,564 01
Dryden Bridge	7,420 93		7,420 93
Dog Lake Dam, storage of water	19,955 99	19,631 33	39,587 32
Dausey Bridge, at Blind River, Algoma	4,048 85		4,048 85
Fawcetts-Stephenson Town line and Kashee River Bridges	2,877 66		2,877 66
Kerr's Bridge, Victoria County	2,531 83		2,531 83
Lake Nosbonsing Bridge, Nipissing District.	3,497 68		3,497 68
London and Port Stanley Toll Road, Elgin County, Towards purchase of	3,000 00		3,000 00
Madawaski River Bridge, Airy Township	2,498 49	999 89	3,498 38
Matawatchin Bridge, Renfrew County	5,010 78	3,474 89	8,485 67
Black Creek Bridge, Dalton Township		2,418 95	2,418 95
Munroe's Rapids, Mississippi River, removing obstructions	500 00	400 00	900 00
Nugget Creek Bridge, Kenora District	963 29		963 29
Neebing River Bridge, Neebing Township	1,800 00		1,800 00
North West Arm Bridge	999 68		999 68
Pickerel River Bridge, Wilson Township	1,846 46		1,846 46
Root River Bridge and approaches, Algoma District	720 00		720 00
Rossport Bridge, Thunder Bay District	881 75		881 75
St. Joseph Township Bridge, Algoma District	789 27	499 71	1,288 98

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July 1867. to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st Oct., 1910.
	$ c.	$ c.	$ c.
Spanish River Bridge (Grant to Nairn Township)	1,000 00	.....	1,000 00
Spanish River Bridge, Nairn Township	10,853 53	3,064 75	13,918 28
Stisted, Sharpe's Creek and Hoc Roc Bridges.	1,419 62	1,117 66	2,537 28
Severn River Bridge, East Branch, Rama Township	1,990 00	.....	1,990 00
Tunnel Bridge, Wells Township	105 19	5,236 35	5,341 54
Vermilion River Bridge, Whitefish	14,308 55	4,532 08	18,840 63
Whitestone River Bridge, Parry Sound District	425 94	.....	425 94
DRAINAGE WORKS—			
Tilbury East outlet Drain	3,020 00	.....	3,020 00
Beaver Creek Drain, Cornwall Township	750 00	.....	750 00
Pelee Island Drainage, 63 Victoria, chapter viii.	1,500 00	.....	1,500 00
Miscellaneous Drainage	27 00	.....	27 00
Drainage Works, Township of Elma	4,000 00	.....	4,000 00
Big Creek Drain, Townships West and North Tilbury	8,367 30	.....	8,367 30
Outlet Drain, Eastern Township	2,480 00	.....	2,480 00
Petite Castor River and Annabel Creek, Drainage Works, Township Winchester	7,700 00	.....	7,700 00
Becquithe Creek Drain, Cumberland and Clarence Townships	1,000 00	.....	1,000 00
Kenyon, Charlottenburg, Cornwall and Roxborough Townships	700 00	.....	700 00
Monkland's Drainage Scheme, Roxborough Township	1,200 00	.....	1,200 00
Nesbit and Rogers Drains, Township Bosanquet	300 00	.....	300 00
Mud Lake Drainage, Township Keppell	963 23	.....	963 23
Fraser Creek Drainage, Township Roxborough	300 00	.....	300 00
Outlet for Durham Creek, Township Brooke.	1,300 00	.....	1,300 00
North Branch Drainage Works Townships Roxborough and Cornwall	2,000 00	.....	2,000 00
Pottawatomie River Drainage Works, Township Derby	3,500 00	.....	3,500 00
Douro Drainage Works, Township Douro	1,200 00	.....	1,200 00
Ruscomb Drainage Works, Township Rochester	3,000 00	.....	3,000 00
Forbes Drainage Works, Township E. Tilbury	2,000 00	.....	2,000 00
Snake River, Township Bromley	7,700 00	.....	7,700 00
Lalonde Drainage Works	900 00	.....	900 00
Silver Creek and Castor River Works, Township Mountain, Osgoode, South Gower and Winchester	2,400 00	.....	2,400 00
Long Swamp Drainage Works (or Davidson), Township of Keppell	1,500 00	.....	1,500 00
McGregor Creek Works, Township of Howard	2,000 00	.....	2,000 00
McIntyre Creek	1,200 00	.....	1,200 00
Medonte Township	1,800 00	.....	1,800 00
Barkley Creek, Winchester Township	1,000 00	.....	1,000 00
Silver Creek and Castor River	1,600 00	.....	1,600 00
Allan Arcand	2,200 00	.....	2,200 00
Castor Extension and 8th Concession	1,600 00	.....	1,600 00
Millar Drain, Township of Mountain	220 00	.....	220 00
Baldwin Drain, Township of Mountain	290 00	.....	290 00

STATEMENT No. 2.—Continued.

Name of Work.	Expenditure 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st Oct., 1910.
	$ c.	$ c.	$ c.
Big Creek	1,000 00	.....	1,000 00
Bromley Township	100 00	.....	100 00
Dauphin Works	3,000 00	.....	3,000 00
Cavan Township Drainage Works	2,000 00	.....	2,000 00
Whitebread Drainage Works, Township of Sombra	4,000 00	.....	4,000 00
Pelee Drainage Works, Township of Mersea.	5,000 00	.....	5,000 00
Bromley Township Drainage Scheme	1,000 00	.....	1,000 00
McIntyre Creek Drainage Works, Drummond Township	1,000 00	.....	1,000 00
Merrick Creek Drainage Works, Township South Sandwich	1,000 00	.....	1,000 00
Dawn and Enniskillen Town Line Drain	1,500 00	.....	1,500 00
Pike Drainage Works, Township Tilbury East	2,000 00	.....	2,000 00
Dauphin Drainage Works, Township Raleigh	2,000 00	.....	2,000 00
Aux Raisin Drainage Scheme	4,000 00	.....	4,000 00
Cavan Township Drainage Works	2,000 00	.....	2,000 00
Ruscombe Drainage Works, Township Rochester	5,500 00	.....	5 500 00
Logan North West Drain, Township Logan.	500 00	.....	500 00
Hardy Creek Drainage Works, Township Adelaide	1,500 00	.....	1,500 00
Burnett Drain Elma Township (revote)	750 00	.....	750 00
Hardy Creek Drain, Metcalfe Township	1,000 00	.....	1,000 00
Logan Drain, Logan Township	500 00	.....	500 00
Luther Township Drainage, Luther Township	1,500 00	.....	1,500 00
Pedan Drainage Works, Marlborough Township	1,000 00	.....	1,000 00
Spring Creek Drainage Works, Lochiel Township	2,000 00	.....	2,000 00
Eldon Township Drainage	.....	750 00	.....
Burnet Drain, Elma Township	.....	750 00	.....
Dawn and Enniskillen Drainage	.....	1,000 00	.....
Aux Raisin River (Osnabruck)	.....	3,000 00	.....
Pelee Island Drainage	.....	2,000 00	.....
Ruscombe River, Rochester Township	.....	800 00	.....
Little River, Sandwich East	.....	2,000 00	10,300 00
Survey and Drainage Swamp Lands (Prov. Acct.)	36,600 51	.....	36,600 51
Sundry Drainage Works (charged to municipalities)	329,980 93	.....	329,980 93
Temiskaming Railway Surveys	24,823 58	.....	24,823 58
Roads, Township Ryerson	7,295 06	.....	7,295 06

STATEMENT No. 2.—Concluded.

Name of Work.		Expenditure, 1st July, 1867, to 31st Oct., 1909.	Expenditure 1909-10 to 31st Oct.	Total Expenditure to 31st Oct., 1910.
		$ c.	$ c.	$ c.
Clearing and Log Houses on free land grants —Settlers' Homestead Fund		16,780 75	.....	16,780 75
Colonization and Mining Roads		5,718,304 46	455,602 34	6,173,906 80
Aid to Railways		8,160,357 01	138,412 94	8,298,769 95
NOTE:—				
Certificates issued to Railways	$10,487,908 45			
Cash paid direct to Railways	1,873,362 42			
Aid granted, 2,678.197 miles	12,361,270 87			
Certificates outstanding ..	4,062,500 92			
Actual cash expended to 31st October, 1910	$8,298,769 95			
TOTALS		29,063,426 66	1,543,221 94	30,606,648 60

Department of
Public Works, Ontario,
Toronto, January, 1911.

J. P. EDWARDS,
Accountant,
Public Works.

STATEMENT No. 3.

Being a classified statement showing the expenditure on Capital Account for Public Buildings, Public Works, Roads, Aid to Railways, etc. (1) The total expenditure for thirty-seven years and six months, from the 1st of July, 1867, to the 31st of December, 1904: (2) The total expenditure for five years and ten months to the 31st of October, 1910; and (3) The grand total expenditure from the 1st of July, 1867, to the 31st of October, 1910.

Name of Work.	Expenditure 1st July, 1867, to 31st Dec., 1904.	Expenditure, 1st January, 1905, to 31st October, 1910.	Total Expenditure to 31st October 1910.
	$ c.	$ c.	$ c.
1. Hospitals for the Insane, etc., at Toronto, Mimico, London, Hamilton, Kingston, Brockville, Orillia, Cobourg, Penetanguishene and Woodstock	4,774,584 48	836,952 89	5,611,537 37
2. Penal Institutions, viz., Reformatory for Females, Reformatory for Boys, and Central Prisons, Toronto and Guelph	1,356,979 02	240,481 69	1,597,460 71
3. Educational Institutions, viz., Institution for Deaf and Dumb, Belleville, Institution for the Blind, Brantford, School of Practical Science, Normal and Model Schools at Toronto and Ottawa, and Normal Schools at London, Stratford, Hamilton, Peterborough and North Bay, and Hygienic Building, London	1,791,329 68	722,714 76	2,514,044 44
4. Agricultural Institutions, viz., Agricultural College, Guelph; Winter Fair Building, Guelph; Fruit Experimental Station, Jordan Harbour; Dairy Schools, Kingston and Strathroy; Dairy Farm, Algoma, and Farm, Mimico	709,257 51	251,695 42	960,952 93
5. Buildings for Administration of Justice, being Osgoode Hall, and Court Houses, Lockups, etc., in the Districts of Algoma, Thunder Bay, Muskoka, Parry Sound, Nipissing, Manitoulin, Sudbury, Rainy River, and Kenora	459,938 26	347,186 83	807,125 09
6. Parliament and Departmental Buildings, and Government House	1,776,474 75	387,139 81	2,163,614 56
7. Works for the improvement of Navigation, such as locks, dams, slides, etc.	1,010,493 50	129,985 04	1,140,478 54
8. Works for the improvement of Transportation, such as bridges, piers, roads, etc.	204,033 68	576,876 84	780,910 52
9. Drainage Works, Expenditures and Advances to Municipalities	418,161 85	74,808 25	492,970 10
10. Miscellaneous Expenditure, viz., Brock's Monument, Niagara River Fence, Clearing of Log Houses, Township of Ryerson, Temiskaming Surveys, and Immigration Lodging House	54,590 07	10,287 52	64,877 59
11. Colonization and Mining Roads	4,059,464 44	2,114,442 36	6,173,906 80
12. Aid to Railways (actual cash expended)	7,456,173 01	842,596 94	8,298,769 95
GRAND TOTAL	24,071,480 25	6,535,168 35	30,606,648 60

J. P. EDWARDS,
Accountant.

Department of Public Works, Ontario.
Toronto, January, 1911.

STATEMENT No. 4.

Being Statement of Contracts and Bonds entered into with His Majesty for the year ending 31st of October, 1910.

Date.	Service.	Subject of Contract.	Contractors.	Sureties.	Description.	Amount.
Nov. 1, '09...	Parliament Buildings, Toronto (west wing).	Supply and delivery of New Brunswick Stone (No. 1 River John Brown stone) required in the erection and reconstruction of the west wing.	Britnell and Company, Limited, of the city of Toronto.	.....	Dimension stone per cubic ft..... Promiscuous blocks per cubic ft.....	$ c. 1 00 90
Nov. 19, '09..	Parliament Buildings, Toronto (west wing).	Supply and delivery of sand required in the erection and reconstruction of the west wing.	The York Sand and Gravel Company, of the City of Toronto.	.....	Per cubic yard....	1 12½
Dec. 28, '10..	Education Department, Toronto.	Installing new water closets, ventilating system to lavatories and repairs to ceiling of lavatories.	The Fred Armstrong Company, Limited, of the City of Toronto.	.....	.....	950 00
Feb. 12, '10.	Treasury Department, Parliament Buildings, Toronto.	Metal cases to be installed in the vault of the Treasury Department.	The Office Specialty Manufacturing Company, Limited, of the City of Toronto.	.....	.....	1,050 00
March 5....	Parliament Buildings, Toronto (Library addition.)	For the erection and construction of an addition to the Parliament Buildings for offices and library, etc.	Fred Holmes and Sons, Limited, of the City of Toronto.	Robert Davies and Wm. Britnell, both of the City of Toronto.	.....	517,534 00
March 29...	Parliament Buildings, Toronto (Department of Lands and Mines.	For the supply and erection of metal cases in the vault of the Survey Branch, Lands and Mines Department.	George N. Reynolds and Company of the City of Toronto.	.....	.....	2,987 00

STATEMENT No. 4.—Continued.

Being Statement of Contracts and Bonds entered into with His Majesty for the year ending 31st of October, 1910.

Date.	Service.	Subject of Contract.	Contractors.	Sureties.	Description.	Amount.
March 31 ...	Kenora District	For the erection of a Court House in the town of Kenora.	M. A. Pigott and Son of the City of Hamilton.	American Surety Company of New York, one of the United States of America.	.....	$ c. 35,240 00
April 7.....	Parliament Buildings, Toronto (West Wing)	For the brick, cut stone and other works required in connection with the erection and reconstruction of the West Wing.	Edward Gearing and John F. Curtis, both of the City of Toronto. (Gearing and Curtis.)	.....	On cost of labour only, 10 per centum	10%
April 20	Parliament Buildings, Toronto (West Wing)	For the carpenters' and joiners' work, etc., required in connection with the erection and reconstruction of the West Wing.	Thomas V. Gearing, of the City of Toronto.	.....	On cost of labour and materials, 9 per centum.	9%
April 22....	Black Creek Bridge..	The supply and erection of the superstructure of a steel bridge over the Black Creek in the Township of Dalton in the County of Victoria.	The Hamilton Bridge Works Company, Limited, of the city of Hamilton.	None	.....	974 00
April 22....	South River Bridge..	The supply and erection of the superstructure of a steel bridge in Nipissing Township, District of Parry Sound.	The Hamilton Bridge Works Company, Limited, of the City of Hamilton.	None	.....	1,662 00
April 22....	Eau Claire Bridge....	The supply and erection of the steel superstructure of a bridge over the Amabel du Fond River in the District of Nipissing.	The Western Bridge and Equipment Company, of the city of Chatham.	None	.....	900 00

						$ c.
April 22....	Magnetawan River Bridge.....	The supply and erection of the steel superstructure of a bridge over the Magnetawan River in the Township of Perry, District of Parry Sound.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	750 00
April 22....	Burnt River Bridge...	The supply and erection of the steel superstructure of a bridge over Burnt River at the Village of Gooderham, District of Haliburton.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	580 00
April 22....	Wissi-Wassa Bridge..	The supply and erection of the steel superstructure of a Bridge over River at Wissi-Wassa, District of Parry Sound.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	580 00
April 22....	Hoc-Roc River Bridge.	The supply and erection of the steel superstructure of a bridge over river on the Doe Lake Road in the Township of Muskoka, District of Muskoka.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	225 00
April 22	Rosseau River Bridge (Cardwell, Baxter and Stephenson Bridges).	The supply and erection of the steel superstructure of a bridge over the Rosseau River in the Township of Cardwell, District of Muskoka.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	492 00
April 22	Muskoka Road Bridge (Cardwell, Baxter and Stephenson Bridges).	The supply and erection of the steel superstructure on the Muskoka Road in the Township of Stephenson, District of Muskoka.	The Western Bridge and Equipment Company, of the City of Chatham.	None.....	.....	225 00

STATEMENT No. 4.—Continued.

Being Statement of Contracts and Bonds entered into with His Majesty for the year ending 31st of October, 1910.

Date.	Service.	Subject of Contract.	Contractors.	Sureties.	Description.	Amount.
						$ c.
April 22	Birch Creek Bridge ..	The supply and erection of the steel superstructure of a bridge over Birch Creek in the Township of Hallam, District of Algoma.	The Dickson Bridge Works Company, Limited, of the Town of Campbellford.	James Dickson and George T. Dickson, both of the Town of Campbellford.	.....	3,283 00
April 22	Rydal Bank Bridge...	The supply and erection of the steel superstructure of a bridge over the Thessalon River at Rydal Bank, District of Algoma.	The Dickson Bridge Works Company, Limited, of the Town of Campbellford.	James Dickson and George T. Dickson, both of the Town of Campbellford.	.....	2,995 00
May 7.	Parliament Buildings, Toronto (West Wing).	The fireproofing, concrete work, etc., in connection with the erection, reconstruction and additions of and to the West Wing and the West Intermediate Bay.	Edward Gearing and John E. Curtis, both of the City of Toronto.	Alexander Marshall and George W. Britnell, both of the City of Toronto.	.....	54,000 00
May 19	Osgoode Hall, Toronto	The erection of an addition to the North side of the present Main Building.	Shadrach F. Whitham, of the City of Brantford.	James L. Christie, of the City of Brantford, and Charles Charters, of East Toronto.	.....	85,856 20
May 31	Normal and Model Schools, Ottawa....	Supply of Wood for the season 1910-1911 to the 30th of June.	Frederick F. Morris, of the City of Ottawa.	Robert G. Code and George B. Acheson, both of the City of Ottawa.	Hardwood, per cord Pine slabs, "	6 75 3 75

May 31	Normal and Model Schools, Ottawa.	The supply of hard coal for the season 1910-1911, ending 30th of June.	The Independent Coal Company, Limited, of the city of Ottawa.	Robert Hastey and Harry S. Shaw, both of the City of Ottawa.	Large egg coal, per ton ..... Stove coal, per ton.	$ c. 7 20 7 20
May 31	Normal School, Hamilton.	The supply of hard coal and wood for the season 1910-1911, ending 30th of June.	The Rogers Coal Company, Limited, of the city of Hamilton.	Hamilton W. Robinson and John W. Gillies, both of the city of Hamilton.	Large egg coal, per ton..... Pine slabs, per cord	5 40 5 00
May 31	Normal School, London.	Supply of hard coal and wood for the season 1910-1911, ending 30th June.	John A. McClurg, of the city of London.	Arthur McLurg and Byron McKay, both of the city of London.	Large egg coal, per ton..... Pine slabs, per cord	6 30 4 00
May 31	Normal School, Stratford.	Supply of hard coal and wood for the season 1910-11, ending 30th June.	Casper Schneider, of the city of Stratford.	Charles J. Stewart and Felix Devlin, both of the city of Stratford.	Large egg coal, per ton..... Pine slabs, per cord	6 00 5 00
May 31	Normal School, Peterborough.	Supply of hard coal and wood for the season 1910-1911, ending 30th June.	The Ontario Coal Company, Limited, of the city of Peterborough...	Gerald A. Rackham and Catherine M. Rubidge, both of the city of Peterborough.	Large egg coal, per ton..... Pine slabs, per cord	6 75 3 00
May 31	Normal School, North Bay.	Supply of hard coal and wood for the season 1910-1911, ending 30th June.	James T. Lindsay and James McCluskey, both of the town of North Bay. (Lindsay and McCluskey.)	John W. Richardson and Mackie Brothers, Limited, all of the town of North Bay.	Large egg coal, per ton..... ..... Pine slabs, per cord	7 15 3 50
May 31	Brantford Institution for the Blind.	Supply of coal for the season 1910-1911, ending 30th June.	George W. Wilson, of the city of Brantford.	Frank Wilson and Edwin Wilson, both of the city of Brantford.	Small egg coal, per ton..... Stove coal, per ton Nut coal, " Soft coal, ¾ lump, per ton	5 40 5 40 5 40 4 08

STATEMENT No. 4—Continued.

Being Statement of Contracts and Bonds entered into with His Majesty for the year ending 31st of October, 1910.

Date.	Service.	Subject of Contract.	Contractors.	Sureties.	Description.	Amount.
June 2.....	Belleville Institution for the Deaf and Dumb.	Supply of hard coal and wood for the season 1910-1911, ending 30th June.	Nathaniel Allen, of the city of Belleville.	John McKeown and Thomas Stewart, both of the city of Belleville.	Hard grate coal, per ton	$ c. 5 92
					Hard small egg coal, per ton	6 15
					Nut coal, per ton ..	6 65
					Green hardwood, per cord	6 00
					Dry hardwood, per cord...	6 00
June 2.....	Toronto Normal and Model Schools, and Osgoode Hall.	Supply of hard coal and wood for the season 1910-1911, ending 30th June.	Patrick Burns, of the City of Toronto (P. Burns and Company).	George D. Macdonald and George C. Mackenzie, both of Toronto.	Grate coal, per ton.	5 80
					Large egg "	5 80
					Stove "	6 00
					Hardwood, per cord	7 00
					Pine slabs	4 75
June 2.....	Toronto Parliament Buildings, Normal and Model Schools and Osgoode Hall.	Supply of hard and soft coal for the season 1910-11, ending 30th June.	The Connell Anthracite Mining Company, Limited, of the City of Toronto.	William H. Smith and Charles W. Murray, both of the City of Toronto.	Stove coal, per ton.	5 10
					Soft " "	4 15
June 2.....	Government House and Parliament Buildings, Toronto.	Supply of Hard coal and hard and pine wood for the season 1910-1911, ending 30th June.	The Standard Fuel Company. Limited, of the City of Toronto.	Charles T. Logan and George Vick, both of the City of Toronto.	Stove coal, per ton.	6 00
					Nut " "	6 00
					Pea " "	3 99
					Hardwood, cord...	7 00
					Pine wood "	4 75
June 13.....	Osgoode Hall Toronto.	The installation of a heating plant, a system of Thermostatic control, and the plumbing works, in the addition to the north side of the present main building.	Purdy, Mansell, Limited, of the City of Toronto.	Fred. J. Lucas and Lewis R. Fox, both of the City of Toronto	Heating plant.....	7,786 00
					Thermostat system	2,700 00
					Plumbing, etc.....	4,750 00
						15,236 00

July 8.....	Osgoode Hall, Toronto.	The electric wiring in the new addition and also the old portion of the building.	Rice, Green and Company, Limited, of the City of Toronto.	London Guarantee and Accident Company, Limited, of Toronto.	.....	2,500 00
July 11.....	Parliament Buildings, Toronto, (west wing).	The electric conduit and wiring works required in the erection and reconstruction of the west wing.	The Robert Simpson Company, Limited, of the City of Toronto.	.....	.....	3,750 00
July 13.....	Normal School, Toronto.	The installation of a plumbing system in the lavatories.	Fiddes and Hogarth, Limited, of the City of Toronto.	Albert Eward and Herbert Angell, both of the City of Tronto.	.....	2,022 00
July 25	Normal Schools (Ottawa, Hamilton, Stratford, Peterborough and North Bay.)	The supply and erection of ash elevators at Ottawa, Hamilton, Stratford, Peterborough and North Bay.	The Pendrith Machinery Company, of the city of Toronto.	.....	Ottawa..... Hamilton..... Stratford..... Peterborough ..... North Bay.....	329 00 301 00 311 00 310 00 326 00 1,577 00
July 13.....	Parliament Buildings, Toronto (west wing)	The construction and completion of the plumbing, and of the steam heating works, etc., in connection with the erection and reconstruction of the west wing.	Purdy, Mansell, Limited, of the city of Toronto.	William Sheppard and Lewis R. Fox, both of the city of Toronto.	Plumbing, etc., steam heating...	9,536 00 19,674 00 29,210 00
August 3 ...	Belleville Institution for the Deaf and Dumb.	Alterations to a barn on the grounds of the Institution.	John Zufelt and Norman Button, of the town of Trenton (Zufelt and Button).	.....	.....	2,270 00
August 18...	Brantford Institution for the Blind.	The construction of granolithic walks on the grounds of the Institution.	P. H. Secord and Sons, Limited, of the city of Brantford.	.....	Per square foot....	16

STATEMENT No. 4.—Continued.

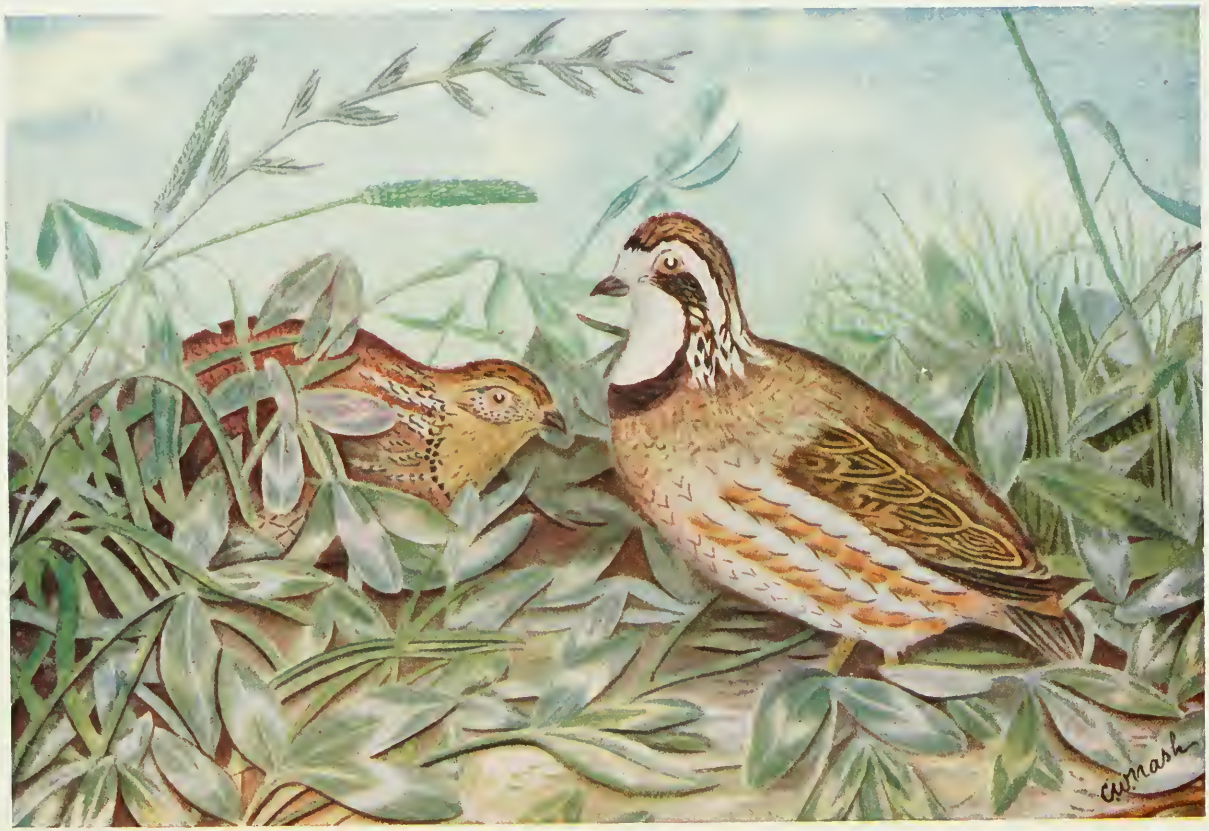
Being Statement of Contracts and Bonds entered into with His Majesty for the year ending 31st of October, 1910.

Date.	Service.	Subject of Contract.	Contractors.	Sureties.	Description.	Amount.
						$ c.
August 18...	Hœffler Bridge, and Overhead Bridges, Soo Branch C.P. R'y.	Supply and erection of the steel superstructure of a bridge over Hœffler Creek, near Massey, Township of May, and for bridges in Townships of Drury, Baldwin and Hallam, respectively (4 in all).	The Jenks-Dresser Company, Limited, of the city of Sarnia.	.....	Hœffler Bridge, near Massey.....	1,531 00
					Drury Tp ..$1,895 Baldwin " 1,809 Hallam " 1,765	5,469 00
						7,000 00
August 18...	Kingston Eastern Dairy School.	Alterations and additions to the building.	William McCartney, of the city of Kingston.	.....	.....	2,200 00
August 20..	Parliament Buildings Toronto (west wing).	The marble work required in connection with the erection and reconstruction of the west wing.	Hoidge Marble Works, Limited, of the city of Toronto.	William Cowan and and Henry F. Codd, both of the city of Toronto.	.....	32,800 00
August 20..	Parliament Buildings, Toronto (west wing).	The slating work and the copper work, etc., required in connection with the erection and reconstruction of the west wing.	Douglas Brothert, Limited, of the city of Toronto.	Edward J. Cousins, and Thomas D. Wilson, both of the city of Toronto.	Slating works, etc. Copper works, etc..	2,400 00 14,357 00
						16,757 00
August 23..	Parliament Building,. Toronto (west wing).	The Marble Mosaic Tile Works, etc., required in the erection and reconstruction of the west wing.	Henry M. Robinson and Company, of the city of Toronto.	Janie E. Massales and Kenneth Ainslie Burgess, both of the city of Toronto.	.....	14,240 00
August 23..	Parliament Buildings, Toronto (west wing)	The painting and glazing works, etc. required in connection with the erection and reconstruction of the west wing.	Alexander M. Browne, of the city of Toronto.	Samuel J. Rutherford and John A. Browne, both of the city of Toronto.	.....	9,980 00

Sept. 13.....	Parliament Buildings, Toronto, (west wing)	The lathing and plastering works, etc.. required in connection with the erection and reconstruction of the west wing.	John Hoidge, John R. Hoidge and Richard J. Hoidge, all of Toronto. (Hoidge and Sons).	William Cowan and Henry F. Codd, both of the City of Toronto.	.....	52,840 00
Sept. 21	Dog Lake storage dams, district of Thunder Bay.	The building of storage dams, numbers one (1) and four (4) at Dog Lake.	William White and Ernest V. H. White, of the town of Burlington.	....	Fifteen per centum on cost of labour and materials.	15%
Oct. 15.....	Parliament Buildings, Toronto, (west wing)	Carving stone work, etc., in connection with the erection and reconstruction of the west wing.	Holbrook and Mollington, of the City of Toronto.	.....	.....	10,188 00
Oct. 26	Parliament Buildings, Toronto (west wing)	Wrought iron works, including stairs and elevator fronts required in connection with the erection and reconstruction of the west wing.	Dennis Wire and Iron Works Company, Limited, of the City of Toronto.	Henry J. Hamilton and William Cowan, both of the City of Toronto.	.....	8,946 00

Department of Public Works, Ontario.
Toronto, January, 1911.

J. P. EDWARDS,
Accountant and Law Clerk.



QUAIL—BOBWHITE

(*Colinus virginianus.*)

Fourth Annual Report

OF THE

Game and Fisheries Department

1910

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by L. K. CAMERON, Printer to the King's Most Excellent Majesty
1911.

Printed by
WILLIAM BRIGGS,
29-37 Richmond Street West,
TORONTO

To His Honour JOHN MORISON GIBSON,
a Colonel in the Militia of Canada,
Lieutenant-Governor of Ontario.

MAY IT PLEASE YOUR HONOUR:

I have the honour to submit herewith, for the information of Your Honour and the Legislative Assembly, the Fourth Annual Report of the Game and Fisheries Department of this Province.

I have the honour to be,

Your Honour's most obedient servant,

J. O. REAUME,

Minister of Public Works.

Toronto, 15th December, 1910.

Fourth Annual Report

OF THE

Game and Fisheries Department of Ontario

To the Honourable J. O. Reaume,
Minister of Public Works.

Sir,—It is again my duty to submit for your consideration and approval the Report of the Department of Game and Fisheries for the twelve months ending October 31st, 1910.

The statistics comprising value of fish caught and plants operated by licensed fishermen during the calendar year 1909, and other important matters which could not be computed or prepared for the ten months ending October 31st, 1909, appear in this report, which, with other important matters, I venture to hope will receive from you the approbation accorded those preceding it. While there has been increased expenditure, due to increased remuneration to overseers and others to some extent commensurate with the services rendered, also to the purchase of boats and cost of keeping them in commission, this increase has been fully justified by a large and satisfactory increase of revenue.

Enforcing of Laws and Regulations.

As a rule the Department has had less difficulty in enforcing the fishery regulations than in former years, in a large measure due to the more efficient and better equipped staff of overseers, who, with few exceptions, have given the Department faithful and effective services. Still I regret to say that there are a number of tug fishermen who in their licenses have most valuable privileges, but who in their increasing greed persistently ignore the conditions on which their licenses are acquired, to the detriment and injury of others. Those having charge of public affairs have from time to time been compelled in the interests of the public at large to withdraw or cancel privileges in consequence of their having been most grossly abused. The Government will be justified in future in requiring substantial bonds from those fishermen who have failed to observe the conditions on which their licenses were issued, when applying for renewal of licenses, the bonds to be forfeited to the Government in the event of non-observance of regulations. This would have a most salutary effect, not only preventing violations, but also protecting the rights of those fishermen who act in accordance with the regulations.

In consequence of the large increase in the number of hunters in the Province, and the increased destructiveness of modern firearms, it has been considered necessary to reduce the number of deer that can be legally killed in one year to one. For similar reasons, the open season for several of our most valuable species of

game birds has been largely reduced, it being considered better to have short open seasons than alternate close ones. Of course these changes have subjected the Department to a large amount of unfair criticism. Many of these critics never made a success of anything, and, as a rule, having no business of their own, fondly believe they could improve other people's, if they had the opportunity. Many of these characters have such exaggerated opinions of their own transcendant abilities that they fondly believe that, had the creation of the world been entrusted to them, they could have made a better job of it. Well, poor bodies, it pleases them and hurts no one. Invidious and unjust comparisons have been the stock in trade of some free lances between the Province and the State of Maine, no doubt the result of guess work and ulterior designs. If the mythical amount alleged to be spent by tourists annually in the State of Maine to the disadvantage of Ontario is not mythical, it may be in order to ascertain where these tourists hail from. If, as alleged, ninety per cent. of them are from other States of the Union, then it is like a man taking money out of one pocket and putting it in the other. There are more non-residents of the Province visit Ontario every year than there are non-residents of the United States visit Maine. This is an undisputed fact, which leads us to wonder what object residents of the Province have had in so frequently and persistently fouling their own nests.

Inspectors, Wardens, Overseers and Deputy Game and Fishery Wardens have given the Department faithful and effective services. I extend my warmest thanks to the Provincial police staff for their valuable assistance; also to the employees of the Department of Lands and Mines, who as a rule have done all possible to have the game and fishery laws respected.

In 1906 it was necessary to report to you as follows: "The difficulty of effectually enforcing the fishery laws of the Province should be apparent to those who have given this important matter any consideration. The principal obstacle in the way of effective administration is the divided jurisdiction." The Department of Marine and Fisheries have recently furnished a striking proof of the correctness of the above contention, the Deputy Minister informing me that the Minister had decided to abolish the close season for whitefish in the waters of Lake Erie fronting on the counties of Norfolk and Elgin. You will observe that this act of vandalism was carried out without his having the decency to consult you. Those responsible for that order in these days of conservation committed an injury to the Province of such magnitude that he and his descendants will be unable to atone for to the end of the world. Those hundreds of tons of breeding fish that were destroyed during the month of November in Lake Erie were not owned by the Department who issued the destructive order. Conservation of our natural productions is a sacred duty. May nature be kinder to those responsible for the order than they have been in obeying her laws.

Four years ago carp were considered a nuisance by a large portion of the community, the Department having numerous applications for bonuses for destroying them. It is gratifying to the Department to know that these fish have become quite a commercial factor in the fish business, in fact are becoming one of the most important species.

I trust this is the last we shall hear about abolishing close seasons, and that all concerned will in future act more in accordance with common sense and justice by reverting to nature's perfect plan of reproduction, even if there are elections looming up in the near future.

The appointment of inspectors at the various shipping stations in the Province has had a most salutary effect in preventing shipment and sale of illegal and

immature fish. Reports have been circulated that the fishery laws have not been enforced in the Province. Of course it is not difficult to find fault when predisposed and having an equivocal object in so doing. If the fishery laws have not been enforced in the Province during the last four years, I would like to know what enforcement they received, and for what purpose, during the twenty years preceding 1900. Those whose duty it was to collect arrears due previous to 1900 have concluded fishery protection was a secondary consideration in such appointments.

It is generally conceded that the forests regulate the flow of water in the water courses, and ensure a supply during the dry seasons, while they prevent sudden and disastrous floods. While there is some doubt as to the extent of the effect that forests have on the rainfall, there is no longer any doubt as to the beneficial effect that forests have in conserving water resulting from rainfalls. It has been proved that the rainfall in forests, as compared with the open country, is in the proportion of 100 to 92.5, while the evaporation in the forests is only one-third of that in the open country remote from forests. It is alleged that failure to conserve the forests in Europe has caused most disastrous results, not only from uncontrollable floods, but also from long continued dry weather, resulting in rivers being reduced during the dry seasons to a series of death-dealing stagnant pools, resulting from evaporation caused by the unwise destruction of the forests. It is conceded that the absolute destruction of the forests is a prolific source of drought, and frequently disease. The Department is frequently asked by farmers and others having spring streams running through their property what should be done to enable them to establish trout ponds or stock the streams. To be successful, the banks of both should be planted with trees for the two-fold purpose of preventing evaporation and providing shade for the fish; any of the species of willow are suitable for the purpose.

Re-Stocking.

This year's experience with the raising of bass fingerlings with the single pond at Brantford was a pronounced success. Over 50,000 of these were placed in the various inland waters of the Province, thus ensuring in a few years good angling, both to our own anglers and to the thousands of tourists that visit our Province each year. I must here mention that much of the success attained was through the faithful service rendered by Mr. J. T. Edwards, who was placed in charge. The knowledge he has acquired in the two years will fit him well for the service required of him in the more extensive work in connection with the series of ponds, which are now partly constructed in the village of Mount Pleasant, five miles from Brantford, and in which we hope to raise at least 300,000 of these fingerlings next year. This place for the erection of breeding ponds was wisely chosen, as water in abundance can be had, and it would be difficult to find a more natural place for fish to congregate. These ponds are situated on the T. H. & B. railway, and only a mile and a half from the Grand Trunk, which railways will afford the required means for transporting these fish when they are ready for re-stocking purposes.

Angling Permits.

More angling permits were sold this year than last, notwithstanding the unfortunate strike on one of our most important railways during the height of the tourist season, necessarily keeping many away that otherwise would have come to enjoy the unexcelled fishing which this Province can offer to its annual visitors.

The observance of the laws and regulations was much better this year, very few cases of infractions of the Act being reported to the Department, and I am of the opinion that the tourists, who have gone, in many instances, to great expense in erecting cottages and improving their surroundings, will realize that the regulations enacted were solely in their interest—to protect the fisheries for their enjoyment, not for one or two years, but for all time to come; and when they realize this (and they have already done so in some instances) their co-operation with the Department in enforcing the laws and regulations will be an assured fact.

Patrol Service.

Never in the history of the Province have the fisheries received the protection they had this year through the vigilance of the patrol boats of the Department. From the early spring, as soon as the waters were navigable, these boats were on constant patrol, never ceasing their vigilance night or day, if the occasion required. The logs of the boats, published in this report, will show that thousands and thousands of miles have been covered during the period they were in commission. The "Edna Ivan" patrolled the Great Lakes, and did not go out of commission until the first of December, when, in fact, all fishing had practically ceased for the season. Her Master was most painstaking in the performance of his duties, preventing to a great extent illegal fishing that had in former years been carried on in a most brazen-faced way. Had such protection been given to the fishing in our Great Lakes in former years, they would not have been in the depleted condition they were in when handed over to the Province. The few years that this Government has had this service in its charge have shown such a marked improvement, notwithstanding the inadequate close seasons, that from all sections of the country reports have been received expressing satisfaction with the result. The "Navarch," which operated on the Bay of Quinte and River St. Lawrence, and to some extent the Rideau waters, with its competent crew, always alive to their duties, did excellent service, and you had the opportunity of witnessing for yourself the usefulness of its work. Many illegal nets were discovered by it, and promptly confiscated. These waters need the most careful protection of the fisheries, in the interest both of the net fisherman and the angler. The "Naiad," which patrolled the Kawartha Lakes and Lake Simcoe, rendered most excellent service to the Department. The officer in charge spared neither himself nor crew night or day when duty required. I must especially mention that a particular service on Lake Simcoe during the spawning season of salmon trout, when for days and nights the crew had but little sleep, and the consequence was that, with the assistance of the local overseers, illegal fishing at that time (which in former years had been carried on so openly in spite of the local officers, who did their best with the means at their disposal) was practically stopped, and the result of these fish being protected during their spawning season will in the course of a few years be apparent to all.

I am glad, sir, that you gave your consent to the purchase of the "Ella C." for the protection of the Big and Little Rideau, and the experience with this boat during last season certainly justified the expenditure, for these lakes as well as the remaining Rideau waters are becoming more popular each year. Handsome cottages are being erected, as well as club houses, and their annual visitors reluctantly leave for their homes.

The "Vega," which was assigned to the North Channel of Lake Huron and

On Moon River—Muskoka Lakes District.

Between Lakes Rosseau and Joseph—Muskoka Lakes District.

Georgian Bay, never ceased her patrol from the beginning of May until the 15th November, and much praise is due to the officer in charge for the thorough manner in which he performed his duties.

Mention must be made of the splendid service given by the launch "Mermaid" on the Rideau waters. The Muskoka lakes were better protected by the launch "Meenagha," which for nearly three months patrolled these waters. The launch "Florence" on the Inner Channel of Georgian Bay did good service from early spring until the ice formed. She was on the constant watch for illegal trap nets, which through this service were prevented to a considerable extent. The officer in charge of the launch "Aggie B." at Picton faithfully discharged his duties patrolling those waters in his district of the Bay of Quinte and Lake Ontario. Space forbids me mentioning the other launches which were in commission for this Department, the officers of which discharged their duties in a manner entirely satisfactory to the Department.

Special Officers.

These officers who have been appointed for the inspection of fish at various shipping points to prevent the shipping of illegal and immature fish, did signal service in the protection of the fisheries, and the expense in connection with this work was justified.

The thanks of the Department are due to the railway and navigation companies for their assistance in making much easier the enforcement of the laws and regulations, and to the express companies for their co-operation with the Department in the enforcement of the Act.

Deer.

The number of carcasses of deer carried by the express companies during the open season of 1909 was 3,923, and 24 carcasses of moose. This is a slight decrease from the number carried in 1908, but this is accounted for by fewer hunters going to the woods in 1909.

All of which is respectfully submitted by

Your obedient servant,
E. Tinsley,
Superintendent.

GAME AND FISHERIES INSPECTORS.

Toronto, 30th November, 1910.

E. Tinsley, Esq.,
Superintendent of Game and Fisheries.

Sir,—I beg to submit report for season 1910.

Commercial Fishing.

Commercial fishing has not been as good generally as last season; in a few localities the catch has been even better, but the result as a whole has not been satisfactory. The fishermen give various reasons for this, most of them saying

that on account of the warm summer the water in the great lakes was later in cooling off, and in consequence of this the trout came on the spawning grounds later than usual. They did not catch the usual quantity in October, most of them securing only a few good catches. If correct, this was a good thing for the trout. There is no doubt but that both trout and whitefish are becoming less plentiful each year, and something should be done at once. There are three things that might be done to save this very valuable fish:

1st.—Establish enough hatcheries to take care of all the spawn that is now destroyed.

2nd.—Provide a close season that really protects.

3rd.—Stop all commercial fishing for a number of years.

As to the first, there is no doubt that the hatcheries are a success, as far as the hatching is concerned, no matter what becomes of the young fry afterwards; and surely they stand a better chance of coming to maturity than the spawn would if deposited naturally, this being at the mercy of the weather and all the other enemies that abound in the waters of our great lakes.

Take Lake Erie as an example. It is to-day the greatest producer of fresh water fish known, and has been for years, and none of the lakes have been fished to the same extent, and in none have so many young fry from the hatcheries been planted. We know that Lake Erie is peculiarly adapted for fish life, but I cannot give the whole credit to that: if the rest of our waters were as prolific, we would never hear of the scarcity of fish.

2nd. We all know that the present close season does not protect and no season of thirty days will, if applied to the whole Province, the spawning season varying in different localities. We should have a close season suitable to the different waters, or one long enough to cover them all. From the 15th October to the 31st December would, I believe, protect both trout and whitefish in all the waters of the Province.

3rd. This is something, I hope, that will never be necessary, and is hardly worth mentioning at this time, but if something else is not done it will come.

The much abused carp of a few years ago is coming into his own. It is not long since your Department was being urged to offer a bounty for the destruction of these fish. To-day more men are willing to pay a fee for the privilege of catching them than we have room for, and this change has taken place in about five years. The men now engaged in fishing for carp only are not making fortunes, but are doing well, especially those who have built ponds in which they place these fish when plentiful and hold them until the scarcity, when good prices are obtained. Carp are going to be the cheap fish of the future; they increase very rapidly, are easily caught at certain seasons, stand shipping well, and arrive in distant markets in good condition.

I know the danger when I start telling fish stories, but here are two that you can believe: One haul of a seine in Rondeau Harbour produced twenty-two tons; another man on Lake Erie has shipped nearly one hundred tons of carp, all out of his pond. If this kind of thing keeps up, the price will never be very high, and will be of great benefit in these days of the high cost of living.

Game Fish.

Anglers from nearly all parts of the Province report good catches, most of the complaints coming from the Muskoka Lakes. I have heard some complaints about illegal net fishing, but not as many as in former years. You will no doubt

be able to supply these lakes with a great number of bass from your Brantford ponds, the success of these ponds being now assured, and when the series of ponds now being built are finished, you should be in a position to fill all demands.

I was pleased to learn that the muscalonge catch was extra good this year, especially in Lake Couchiching, no doubt due to the extra protection provided last spring, and the careful patrol of the steamer "Naiad" during the whole season.

The laws and regulations governing both commercial fishing and angling have been fairly well observed, and your officers have been diligent and faithful in the discharge of their duties. A few fines have been imposed for infractions, but there will always be some who are willing to take a chance, but not often the same one the second time—one lesson seems to be enough.

Some of your officers are handicapped by not having boats suitable for the purpose of patrolling their divisions. In this connection I wish again to call your attention to the need of a boat on Lake Superior. From Sault Ste. Marie to Port Arthur there is no way to protect the shore of this lake except by boat, one that would be on duty the whole of the season; not a large boat, but one that would be safe and could get into the smaller harbours. The streams coming into this lake are the home of the brook trout, and deserve more attention than they have received in the past, and it can only be done by providing a suitable boat.

Game.

We have not had full returns of the number of deer and moose killed this season, but they are reported as being plentiful. Partridge very plentiful, the close season of two years, and the favourable winters coming together, producing this result. Is it not time some limit should be placed on the number of these birds that should fall to one gun? We hear of one man getting sixty-eight in one day; another kills over two hundred during the season, and was not out the whole of it, either. It is a shame to preserve these birds for two years, and then have them slaughtered like this. A limited number each day, or a limit for the season, would be an improvement. I know it would be difficult to enforce, but all these things help some. We know the limit helps in bass and muscalonge fishing, and why not in this?

From a great many of your officers I hear as to the difficulty they have where the open season for two kinds of game frequenting the same grounds or waters are not alike; for instance, the open season for snipe and other shore birds opens on the 1st September, and that for ducks on the 15th of the same month. The temptation must be great to a hunter if many ducks are around during that fifteen days, and of course your officers cannot object to guns being carried in places frequented by both kinds of birds.

Trappers.

I strongly recommend that all trappers, either resident or non-resident, be compelled to take out a license. This would not only be a source of revenue, but would also be a protection against poachers. Every licensed trapper would be inclined to see that no illegal work was done, and in these times of high prices for all kinds of furs a small fee will not be a hardship, in fact a great many trappers would be glad to have one imposed. It would also be well to furnish each license holder with a blank on which to make returns of his catch; you would then know something about the value of this business. I am told of a man and boy who sold

over four thousand dollars' worth of furs last spring, and three other men who came out with twenty-seven hundred dollars' worth; those were on the north shore of Lake Superior. And we know these men go into that country with enough flour, salt and tea to last them the winter, and possibly a side of bacon. Can we think that the game does not suffer? and why should not the Province get some return for this as well as from the fish?

I have the honour to be
Your obedient servant,
WM. W. HOLDEN,
Inspector.

E. TINSLEY, ESQ.,
Superintendent of Game and Fisheries.

I have the honour to submit my annual report of the Game and Fisheries in my division for the fiscal year from the 1st of November, 1909, to the 31st October, 1910. In June last you promoted me from the position of Game and Fishery Warden to that of Inspector of Game and Fisheries, which position I trust I will be able to fill to the satisfaction of the Department.

I have found that the laws and regulations have been fairly well observed. In some instances I have been satisfied with imposing a small fine, knowing that would be a sufficient warning to evildoers not to commit a similar offence; but in other instances I have felt that it has been necessary to impose a much greater fine, and this I have never hesitated in doing when I found the offence justified it.

In the Bay of Quinte I believe, from my own observation and from the reports received from the overseers, that the fishermen have obeyed the conditions upon which their licenses were issued, and also observed the close seasons, and I am satisfied that the fishing in the Bay of Quinte has not been as good for many years. This good fishing is accounted for to a great extent by the constant patrol of the Government Fishery Protection Cruiser, which has rendered the Department excellent service during the past year.

I might also mention the patrol boat that operated on Lake Simcoe, as well as on the waters of the Trent Canal. The services which she has given have been of such a nature that illegal fishing was to a very great extent stopped, and the Department must be congratulated upon the excellent crews which were on both these boats.

The angling in the Bay of Quinte is much better this year than formerly, due, in my opinion, to the hoop nets, which capture so many of the coarse fish that prey upon the bass and maskinonge, which form the chief attraction for tourist in the way of fishing during the summer months.

The number of gasoline launches which the Government have either rented or purchased for patrol service in the eastern portion of the Province have been on duty during the greater part of the tourist season, and some did patrol work as early as May, and continued until late on in October. There is no doubt that this patrol service is awakening, not only the resident, but the non-resident, to the fact that the Department no longer will tolerate the wilful breaking of the laws and regulations that a wise Legislature enacts.

I would also recommend that a patrol boat be secured for the Muskoka Lakes. I know that it would have a deterrent effect on the law breakers of that part of the Province. Some years ago these lakes were noted for their excellent angling,

but I have been told by those who visit those grounds that angling is very poor, caused no doubt by illegal netting.

I also would recommend that the boats belonging to the fish buyers be licensed at a fee of not less than $50. This would prevent a great many illegal fish being caught, for the reason that there would be no object in fishermen setting nets for this purpose if they had no sale for them after they were caught. Several buyers have this past season been found trafficking in illegal fish, and, in fact, one concealed a maskinonge in the middle of a box of whitefish, thinking by that means to elude detection.

I think that the season for ducks, plover, snipe, etc., should begin on the same date, viz., September 15th, and that no winter trapping for rats should be allowed, for this cannot be done without injuring their houses. I also recommend that the sale of wild ducks be prohibited for a period of three years; also that trappers be licensed.

I have the honour to be, Sir,
Your obedient servant,
ALF. HUNTER.
Inspector of Game and Fisheries.

GAME AND FISHERIES WARDENS.

Warden Wm. Burt, of Simcoe, reports:

SPECKLED TROUT.

These fish are still very scarce in his district. He heard of a few good catches during the year, but they were very rare. The experiment of planting the trout fry last summer has apparently been successful. He has had reports from several of the streams where the fry seem to be thriving, and the people who report are of opinion that the young fish that are seen are the ones that were planted last spring.

BASS.

The bass fishing in Long Point Bay has been excellent. When weather conditions were favourable for fishing, no angler had any difficulty in getting his legal number of fish. The Brantford experiment of raising the bass for distribution has also been successful.

COMMERCIAL FISH.

The fishermen report the conditions in regard to commercial fish about the same as at the time of his last annual report. The fishermen who have been experimenting with carp ponds have not yet demonstrated that this is a successful manner of handling these coarse fish. The difficulty seems to be that in ponds suitable for growing the carp the bottoms are so soft, and the fish root about in the bottom so much, that it is impossible to catch them out of the pond when

wanted for the market. Of course, the fishermen take quite a number out of the ponds, but he has yet to hear of a single catch in which they have taken anything like the quantity that were placed in the ponds.

Quail and Ruffed Grouse.

The increase in these birds has been practically nil during the year. The sportsmen report that the ruffled grouse appear not to have increased since his last report. This is attributed by many of them to the fact that the weather conditions during the breeding season were not favourable for raising the young birds. He would again recommend that the shooting of quail and ruffed grouse be prohibited for another year.

Woodcock.

This bird is still very scarce in his district. He has only heard of a few being killed.

Black Squirrels.

There has been a decided increase in the number of black and grey squirrels in his district. It is quite a common thing, while driving along the country roads, to see a black or grey squirrel running along the fences.

Wild Geese.

He can find no change in the habits of these birds. There are practically none of them shot in his district.

Wild Ducks.

The district around Long Point Bay report that the wild ducks are more numerous even than last year. The weather conditions having been more favourable, large bags have been fairly numerous this year. It is also reported that a considerable number of black ducks have bred in the marshes about Long Point Bay this season. Before the settlement of the north-west country, the black duck was never known to breed in this neighbourhood. It is supposed that their being disturbed so much by the country being settled in the North-West, they have changed their breeding place, and are now breeding much more numerously in the more southern marshes, where they are protected. He is also of the opinion that the fact that the marshes about Long Point Bay are all owned by shooting clubs, who limit their members' shooting, has had a beneficial effect in the increase of the number of ducks that visit that vicinity. Where the public have free access to the marshes, the ducks have no rest, and it appears to him that, owing to the comparatively small amount of shooting done at them in Long Point Bay, a number of ducks have changed their line of flight, so that they now get the ducks that formerly in their autumn migration pursued another route.

Fur-bearing Animals.

The muskrat is the main fur-bearing animal in his district, and is reported to be fairly numerous again this fall. The trappers found last spring that a

great many of the muskrats had been killed during the winter through the lowness of the waters and their inability to burrow out of their houses to secure a supply of food. They very wisely limited their catch in the different marshes about Long Point Bay, leaving a sufficient quantity for breeding purposes, so that if weather conditions are good there is a possibility of a fair catch next year. The purchasers of fur report that the rats killed in this district in the month of December do not have a good quality of fur. The consequence is that the owners of the land upon which the rats breed never attempt to trap them until spring. The few December rats that are killed are taken by the poachers. He would, therefore, recommend that the killing of muskrats in the month of December be prohibited, and that the use of dogs, spears and guns in the taking of muskrats also be prohibited. His reasons for this have been reported to your Department in the past.

He finds that the game laws have been well observed in his district this year. The Deputy Wardens and Overseers have been attentive in the discharge of their duties, and there have been practically no complaints of infringement of the law.

Warden Victor Chauvin, of Windsor, reports that the fishermen are complaining of light fishing for the year, but they have just started to catch whitefish for the fall fishing, and are expecting them to be very plentiful. The increase of herring north of Pelee Island and west of Point Pelee is quite marked in pound nets. Last year when the fishing tug was fishing with gill nets along the bay and west of Point Pelee, some of the fishermen caught about three to five hundred pounds all the fall, so he hears to-day that they are catching three to five hundred pounds to a lift. He says the mesh for hoop nets in Lake St. Clair should be an inch and a half square. Sturgeon fishing in Lake St. Clair is good this year, other fish very light. The fishery law is very well observed, he having had only two seizures this year—one of 90 American gill nets in Lake Erie, and about 1,400 lbs. of fish, which have been sold for $56, and $150 for the nets: the other from Lake Superior, with 200 lbs. of small whitefish, which was donated to the Home for the Friendless. There is lots of improvement done by the fishermen in catching and shipping fish. All the overseers in his district have done splendid work in the discharge of their duties.

Re Game. Quails are reported to be very numerous amongst the farmers, partridge very scarce, also black and grey squirrels. He thinks that quails, partridge and squirrels should have the same open season, as the partridge being so early this year there has been lots of trouble protecting the quail. Muskrats seem to be as plentiful as other years, and he says all trappers who hunt them should be licensed for the benefit of their protection. Wild geese are flying and flocking for the south. There are a few stopping there, and none of them have been shot. Wild ducks of all kinds are there now, and are very plentiful. A good many of them have been shot by sportsmen. In the Detroit River black and grey ducks are plentiful, and hardly any other kind of duck shot in the river. There have been numbers of redhead, bluebill and other ducks in the waters of Mitchell's Bay, St. Clair Flats, Long Point, and Rondeau. The sportsmen claim that ducks are more numerous this year on the lakes than in previous years. The game law has been fairly well observed in his district. There have been no prosecutions He thinks muskrats should not be taken or killed before the 15th day of February until the 15th April of the same year.

Warden Geo. M. Parks, of North Bay, reports that American anglers have found splendid fishing in Lake Nipissing and tributaries this season, a marked

improvement being noticed over previous years, due no doubt to the abolition of net licenses in these waters. Bass fishing has been especially good, and tourists have expressed great satisfaction at the excellent fishing there, which is reputed now to be the best in the Dominion. The number of tourists visiting that section is increasing, and very few instances have occurred of law violation in regard to permits, etc.

Speckled trout are still plentiful in the northern streams. Guides are beginning to realize the benefit of taking out guide licenses, and American tourists are now asking for licensed guides in preference to those without licenses, realizing that the license is a badge of competency and good service. Partridges are very plentiful, due to the wise provision of the two years close season, which has permitted them to multiply very rapidly.

The revision of the game laws pertaining to deer, restricting each hunter to one deer, will, in his opinion, have very good results, as the large number of deer shipped out each season, under previous regulations allowing two deer to each hunter, was rapidly decimating the species.

In travelling the northern sections he found that moose were reported as plentiful, and he met hunters with some very fine specimens of moose heads.

There are many flocks of plover and snipe about Lake Nipissing and other parts of the district.

Beaver and otter are increasing very rapidly.

Ducks are fairly numerous, especially in the northern section of the district.

Wild geese are seldom seen in the vicinity of Lake Nipissing, but farther north can be found in considerable numbers.

The suggestion made that a general gun license be provided is in his opinion a good one, as it would help to check the indiscriminate carrying of guns, shooting birds, etc., by foreigners employed on railway construction, and small boys.

Warden J. T. Robinson, of Sault Ste. Marie, reports that he has been over his district twice, and is pleased to say that he finds a very great improvement in general. There is a desire on the part of those engaged in fishing, trapping and hunting, as well as settlers, to protect the game and fish, and observe the law. Violations of the law are not frequent in his district. Some who have tried it have been punished, and it seems to be a warning to others to observe the law.

Commercial fishing has been up to the average. Fishermen say that fish is on the increase along the north shore of Lake Superior. The reason for this increase is owing to the preserve the Department keeps in Lake Superior, which is a good breeding ground, and if licenses are not allowed in this preserve for a few years the fish will be as plentiful as they were a few years ago. This preserve should be protected with a patrol boat. There should be no tug licenses granted for Gargantua; the mesh should be nothing less than five inches, and then the small fish would get a chance to mature. The law has been well observed by the fishermen in his district.

Speckled trout is plentiful, and on the inland lakes and streams angling parties report good catches. There are complaints in the Soo about the tourists getting permits to angle. The anglers have obeyed the laws well, as no violations have come to his notice.

The preserve in Lake Superior is one of the best breeding grounds for whitefish and lake trout in the Province, and if the Department refuse to grant fishing licenses in the preserve, Lake Superior will be well stocked with fish in a few years.

Deer and Moose are plentiful there, although a great many were shot in the season of 1909. It was a good spring for the deer this year, as there was no crust on the snow, and the wolves had no chance to catch them. It was a wise move on the part of the Government to cut the number down to one deer this season. He would like to see the Department stop dogs running deer in the hunting season. The law was well observed during the close season.

Ruffed grouse and partridge are plentiful in that district, and he has seen more partridge than for years. The open season for one month is just right. The hatching season was fine, so that accounts for the number of birds now.

Wild ducks are numerous along the north shore of Georgian Bay and Lake Huron, but there are not many up in Lake Superior, as there are no feeding grounds. The open season for ducks is fifteen days too late there, owing to the American season opening on the 1st September. The ducks are driven from our waters into American waters, and the Americans shoot them. He thinks it would be well to have the season on the border open the same time as on the American side.

He has not seen any wild geese in his district, and quail and woodcock are also scarce. Black and grey squirrels are almost a thing of the past in that north country. Snipe and plover are not at all plentiful in Algoma.

Beaver are becoming plentiful in that part, but it is most difficult to protect them, owing to the high value of their skins and the easy way to get them out of the country. They are smuggled out in freight boats going to Montreal, and cannot be detected; but he thinks that stopping all trapping before the 1st December will stop a great deal of illegal work. He would like to see the Department put a small license fee on Canadian trappers, as a number come from the Province of Quebec up there, and it is almost impossible to watch them. Mink and muskrat are plentiful, owing to the strict watch kept on the trappers. Wolves are not as numerous as some report them, but they have more than is good for the welfare of the deer. There are not many of them killed in his district. They are so hard to catch that hunters and trappers do not bother with them. Some that do hunt them say that if the bounty was $25, they could make a business of hunting them.

He says that if the department would put a license for carrying guns, say $2 for each gun, it would be a great help in preserving the game in the north country.

Warden C. N. Sterling, of Kenora, reports that in the western portion of his district the fishermen report a better season than they have had for the past eight years, more especially on Lake of the Woods and Shoal Lake. This is owing chiefly to the large shipments, during the last three years of coarse fish, which prey upon the spawn of the finer and more valuable fish, such as whitefish, pickerel and trout. In the eastern portion of the district, the fishermen tell him they have had a poorer season than for a number of years—as a matter of fact some of the fishermen of Rossport have barely made their expenses. There have been a few infractions of the fishery laws in the northern portion of his district, and along the boundary line between Minnesota and Ontario on the Lake of the Woods. It is a very difficult matter to secure a conviction in these cases owing to the difficulties of travel. He respectfully suggests the appointment of more deputy wardens, and also the commission of a fast patrol boat on Lake of the Woods near the international boundary. He is of the opinion that the Department would be wise in permitting no smaller gill-net than 5-inch mesh, as in the

western portion of that district a great many fishermen are using 5½ and 6-inch and meet with the best results, as they get a larger and better grade of fish.

Moose are very plentiful in the district, particularly in the western portion. He assigns as a principal reason for this increase, the vast forest fires in Minnesota, which have driven the game north. They are very much bunched owing to numerous small bush fires in his own district, which have burnt over a lot of high land, leaving the green valleys and swamps as the only feeding grounds for game.

Caribou.

Caribou are not so plentiful in the district this year as in former years. Many of the Indians tell him this is owing to the great increase of wolves. He learns on the best authority that never before have so many caribou been seen in Keewatin district as at the present time.

Deer.

Red deer are very numerous all over the district. He would strongly urge the Department to prohibit the running of hounds.

Beaver and Otter.

So far as he can learn both beaver and otter are increasing in some parts of the district, but the high price for their pelts is a temptation which few trappers can resist, though it is almost impossible to obtain a conviction.

Mink and Muskrat.

Reports and indications show that these animals are fully up to the standard of last year. In the western portion of the district he has been very successful in preventing the destruction of muskrat houses by the Indians, but with his limited help he finds it difficult to keep a watch on them at all times.

Partridge and Grouse.

A large number of partridge have been destroyed by bush fires, but in spite of this fact they are more plentiful than for a number of years past. Grouse are just about the same as last year.

Ducks and Geese.

In the western part of the district ducks are very plentiful, but wild geese are about as usual.

Warden J. H. Willmott, of Beaumaris, for the districts of Muskoka and Parry Sound, reports *re* fish that the past season has compared favorably with former ones as regards angling. Of course, there is always a hue and cry of "No fish" raised by would-be fishermen, but his personal experience is that, with the right bait, one can generally go out and procure his legal number. This refers principally to the Muskoka lakes. The planting of bass fry from the Brantford hatchery has been most successful, and has met with the approbation of all classes. The fry has always arrived in good condition, and carries much better than the

At head of Lake Joseph—Muskoka Lakes District.

On Lake Rosseau—Muskoka Lakes District.

adult fish which were formerly sent up. The success with which the experiment of propagating bass at Brantford has met with will no doubt justify the Department in going into this to a much larger extent.

Re Game.—Deer are reported very plentiful in the northern portion of Parry Sound, and are also increasing in places which have been depleted in former years, and which have had comparative rest for some time. The Department is to be congratulated for putting into force the recent amendment, limiting each hunter to one deer. This will do away to a great extent with the shooting for sale. The prohibition of hounds into the north country will also have a salutary effect, as it will no doubt prevent many hunters going north. Whilst sympathizing with these men for being done out of their greatest annual treat, it is most gratifying to feel that our deer will have one year of semi-protection.

Partridge.

In consequence of the close seasons for these birds for the past two years, the increase has undoubtedly justified the step. In many places these birds are plentiful, whilst in others, owing no doubt to certain conditions, they are reported scarce.

Beaver.

These animals have increased to a very great extent in many of their former haunts, but in spite of prosecutions he is afraid that many are illegally procured, and find their way to the furriers and dealers.

SPECIAL GAME AND FISHERIES OVERSEERS.

Overseer Daniel Blea, of Uplands, reports that upon a full and close inspection he found that the fish were plentiful, and the sportsmen who visited the district were amply repaid for their time and expense in the quality of sport they had, and numerous expressions of satisfaction have been made to him. He is sorry to report that he has the best of reasons for stating that the law is being violated by members of large clubs, by only a portion of their members taking out a license, and at the termination of their visit their license is transferred to other members. To overcome this he would suggest that all licenses are made returnable in person by the original licensee.

With respect to the partridge, he would say that he has personally covered a great deal of ground before and since the season opened, has also made enquiries from fire rangers and others, and has but one conclusion to come to, viz., that the birds are not as plentiful as is generally expected. Therefore he thinks it would be advisable to again prohibit the shooting of them from season to season until they become more plentiful.

He finds upon careful investigation that the deer are holding their own, and thinks that if the open season were made fifteen days earlier, good results would follow. He would advise the continuance of one deer per man, and would suggest that the sale of venison throughout the Province be prohibited.

As to the fur-bearing animals he is pleased to note that they are increasing in numbers, and the law is being better observed by residents and visitors generally.

Overseer A. Drouillard, of Walkerville, reports that he is pleased to say that there was a general and marked improvement in the observance of the law, and the development of the fisheries in his district, and in consequence he cannot offer many suggestions to improve the condition, with but one exception, viz., the absence of any regulation dealing with the size of "Blues" and "Perch" which he has observed are being shipped from points along Lake Erie, and which are unusually small in size, and he would earnestly recommend prohibiting taking such small fish from the waters.

He has also observed an increase in the catch along Lake St. Clair.

Overseer Henry Watson, of Toronto, reports that the net fishing in this vicinity remains about the same from year to year, with the exception of herring, and that gets worse every year, in fact, only an odd fisherman sets for them, as they have found it does not pay them, and until all the fishermen on this side of the lake are made to use nothing smaller than three-inch mesh will it be any different. The larger herring from Lake Erie drives our small fish out of the market and they have to be turned into ciscoes to be got rid of.

Lake Erie herrings bring about three times as much per fish as ours.

Rod fishing around Toronto is a thing of the past, the water being so badly polluted that even the carp refuse to live in it, but better things are hoped for on completion of the trunk sewer. The fishermen live up to the law, very little illegal fishing being attempted in prohibited waters by poachers.

With regard to illegal shipments, some of the dealers and large fish companies still continue to traffic in illegal fish, but the severe treatment handed out to them will no doubt have a salutary effect.

The game act was never better respected around Toronto than during the past season. The motor boat people gave very little trouble, and some of the Island poachers have turned game protectors. Not quite as many ducks remained over with us through the winter as the year previous, none were killed on this side of the lake but when driven to the American side by southerly gales quite a number of them were slaughtered; not being molested here they become very tame.

The illegal shipments seized in transit get less every year. All the express companies give every assistance to make the traffic as difficult as possible.

He interviewed over one hundred deer hunters returning from all parts of the northern country with reference to both the deer and partridge. The majority report the deer as greatly on the decrease. In proportion the number of fawns that passed through the Union Station was greatly in excess of other years. They found partridge fairly plentiful in most places in the early part of the season, but after the snow came they changed their location and were hard to find.

GAME AND FISHERIES OVERSEERS.

Lake of the Woods and Rainy River District.

Overseer Fred Blanchard, of Fort Frances, reports that he received the patrol boat "Wenonah" from Warden C. N. Sterling, of Kenora, at the town of Rainy River, proceeded with boat to Fort Frances, and portaged it into Rainy Lake. He found the boat very useful in patrolling the international boundary of Rainy Lake.

He seized one rowboat with two Americans for illegal fishing, and got a conviction. He destroyed about 1,000 yards of small mesh nets and a quantity of sturgeon hooks on line. Whitefish are getting smaller, but other fish in this lake are holding their own. There have not been many tourists this summer, which he accounts for by the large number of bush fires in those parts.

Big game and also partridges are on the increase all over the district.

River Nepigon.

Overseer P. A. Leitch, of Nepigon, reports that the number of tourists visiting the Nepigon waters was not quite up to the average this season, yet they all invariably reported a very successful and enjoyable trip. A number of 5, 6 and 7 pounders being taken during the season.

A shortage of guides at times (owing to so much other work in way of transporting supplies to construction camps on Transcontinental Railway, and survey parties on Canadian Northern Railway) has greatly interfered with the tourist traffic the past two or three years.

This transporting of supplies has given steady employment to a large number of Indians, at same wages as they received from tourists, while the tourist traffic for them is irregular and uncertain, they thus have taken to this transportation work in preference to the tourist work, leaving a shortage of good guides for tourists

The present method of making the trip on the Nepigon River, requiring two guides to each tourist fishing in addition to a cook for the party, makes the trip quite an expensive one, and only those of considerable means make the trip, but with the completion of the Transcontinental Railway, which is building along the north end of Lake Nepigon, and a spur two miles long down from their main line to the lake at Ombobika Bay, will give rail connection with the lake.

The Canadian Northern Railway main line from Port Arthur to Sudbury also touches Lake Nepigon along the east shore of Orient Bay according to their line as being located by their surveyors. This line will go within four or five miles of Virgin Falls, on the Nepigon River. When these lines are in operation it will simplify matters, so that so many guides will not be necessary, and thus greatly reduce the cost of the trip, as no doubt proper steamers will be provided on Lake Nepigon. This lake will then become the greatest resort for tourists in the province, owing to its magnificent scenery, numerous islands, clear sparkling water, and teeming with fish of the following varieties, speckled trout, lake trout up to 25 and 30 lbs., whitefish, pickerel, pike and sturgeon; while many of the rivers flowing into Lake Nepigon are well stocked with speckled trout. The White Sand River, particularly, is noted for speckled trout up to 2, 3 and 4 pounds. This lake in a few years should be the source of a handsome revenue to the province both directly and indirectly.

With regards to the present methods of issuing angling permits for these waters he begs to report that at various times they have parties who are passing over the continent from ocean to ocean, who have a few days to spare before their steamship sails, and who stop off there to spend these few days fishing, but when they find that a fee of $15.00 is charged for a permit for two weeks, which is the shortest period for which the regulations permit angling permits to be issued, they object to paying such a high fee for a few days fishing, and abandon the idea of the trip. If it were arranged so that permits might be issued for any number of days from one to seven days at so much per day these parties would then make the trip, and the province receive the fee besides considerable free advertising among the friends of such parties, whereas at present they get neither.

The same system should be adopted with regard to resident permits. As the residents of Nepigon have no other waters wherein to fish without going considerable distance from home, and would on several occasions during the season, like to spend part of a day, or a day, fishing the Nepigon, whereas they cannot spare the time to take more than one day off at a time, and under the present system they would have to pay $5.00 for permit for one day's fishing, and possibly before they could take another day's fishing their permit for two weeks would have expired.

These permits should also, he thinks, be issuable for from one to seven days at so much per day.

When Lake Nepigon becomes in demand as a tourist resort he would point out the fact that the present regulations do not permit of issuing angling permits for a longer period than four weeks, and he would recommend that permits for Lake Nepigon be issuable for three months to enable tourists making a permanent camp or having a summer cottage and spending all summer thereat. This he thinks is necessary to make a permanent resort of the Nepigon waters.

Many cariboo, moose and red deer have been seen during the season. Moose and red deer, particularly, are becoming very numerous.

Partridges also have increased in numbers greatly during the past two or three years.

Lake Superior.

Overseer A. Calbeck, of Sault Ste. Marie, reports that during the month of November, 1909, he patrolled the waters of the north shore of Lake Superior between Sault Ste. Marie and Otter Head—by the shore line a distance of 150 miles, in the sail and gasoline boat "Glen Campbell." At Garrett's Harbor he seized two tugs with nets and fish, and brought same to Sault Ste. Marie, when the same was disposed of by the Department; and at the Lizard Islands he found that there had been illegal fishing in those waters which have been set apart by the Department in which no fishing is allowed. This illegal work was done about the first of October before the patrol boat was put on. This patrol boat prevented a great amount of illegal fishing by scoop nets in the mouths of the Montreal and other rivers. During the month of December, on account of the ice forming, there was very little fishing done.

In January he proceeded to Thessalon, and seized a quantity of nets and fish from several fishermen there who were fishing without a license; this case was settled by Game and Fishery Warden Hunter. He also visited Goulais Bay during the same month, and stopped the fishing there until the fishermen received their license.

There were 4 tug licenses, 1 gasoline launch, and 31 sailboat licenses issued this season: 24 of those boat licenses have been issued between Sault Ste. Marie and Batchewana, and as the town of Sault Ste. Marie is depending on these waters for their fish supply he would strongly recommend that this number be not increased. An effort was made this fall by a party to have the Board of Trade there recommend the granting of a tug license in those waters. If this was done it would practically deplete those waters in two seasons, as the chief catch is now during the winter months and the early spring. During the summer months many of the fishermen cease fishing in those waters and move up the lake, and he would strongly recommend that the licensees be compelled to fish in the waters in which the licenses were first issued, and not be allowed to move on to grounds occupied by other fishermen. During the months of July, August and September

the local dealers here are unable to obtain any whitefish to supply the hotels during the tourist season, which, if continued, will place Sault Ste. Marie, Ont., at a great disadvantage with Sault Ste. Marie, Michigan, where they have whitefish daily during the summer months. Local dealers claim that the Dominion Fish Co., informed them they were catching no white fish, and could not supply the local trade there. As a matter of fact he has gone over the books of the company at one station only (Gargantua), and he found that enough whitefish were caught to supply the town.

During a part of this season one of the Dominion Fish Co.'s tugs received a license to fish off Gargantua, and was allowed during the latter part of the season to move to Michipicoten Harbor. He thinks that, as in the case of sailboats they should be compelled to fish during the season where their license calls for. And he would again respectfully recommend that another season this tug license be transferred to Michipicoten Island.

The catch of fish this season, according to reports, is about the same as last—that is lake trout. There has been a decrease in the catch of whitefish caused by over fishing, and unless the export of this valuable fish is stopped in the eastern part of Lake Superior these waters will soon be depleted.

One hundred and eighteen angling permits at $2 each, and 19 at $5 each were sold this season. These anglers employ guides, and their fitting out at S. Ste. Marie creates quite a trade, and it also shows the necessity of some supervision being maintained on the different streams during the tourist season.

He was unable to give any definite information in respect to the way the law was observed by fishermen and anglers who fish in the different trout streams flowing into Lake Superior. During the past season he has been unable to give those waters and streams any supervision, and in fact there has been no supervision whatever. Preserves are set apart in which no fishing is allowed, but with fishermen fishing around the same, and no officer present at times, it is not to be wondered at if they take advantage of his absence.

About the 1st March he received information that illegal trapping for beaver was being carried on along the line of the A.C.R. During the month of April he went up the A.C.R. to one of the lumber camps and secured a conviction against a jobber who was allowing his dogs to run deer. He also found one beaver skin in the possession of a farmer, residing about ten miles from S. Ste. Marie, but as he swore he had had this skin in his possession for the last thirty-two years, the magistrate gave him the benefit of the doubt. In July he seized a launch, the property of an American who was angling in Canadian waters without a permit, and who had also a repeating shot-gun in his possession. The launch was returned to him by the Department. During the month of August he proceeded to Agawa River on information that American tourists were killing deer. He arrived there at 4 p.m., but this party had left in their yacht that morning. He also found a party had left in their yacht that morning. He also found a party of five, who each had a rifle, which is not allowed by the Ontario Game and Fisheries Act, and which should be strictly enforced.

Three hundred resident deer licenses were issued, 14 moose licenses, and 8 non-resident licenses for the month of November, 1909. The law was fairly well observed during the hunting season. The hunting season in that district he thinks should be fifteen days later, from Nov. 15th to Nov. 30th, as large quantities of venison and moose were rendered unfit for use last season on account of the warm weather. Deer and moose seem as plentiful as in former years, although

large numbers of the former are reported being killed by wolves, which are on the increase. During his recent trip up Lake Superior at Agawa River one party (a trapper) had eleven wolf skins which he had killed since August.

The wisdom of the department in having partridge protected during the last three years has been shown in good results, as they have increased in that district to a large extent.

Overseer W. H. S. Gordon, of Port Arthur, reports that the fisheries of his district has been given special attention this season.

The fishing of the Thunder Bay section has proved, in some parts, to be much better than for some years, whilst in other parts of the lake there has been a falling off of the catch.

One of the fishermen, who has been fishing out of Port Arthur for the past twenty years, states that this season he has had the best fishing during the past five years; in fact, his total catch so far this season has been equal to that of the two previous seasons. The weather conditions, it is claimed, has had a good deal to do with the fishing. It is not thought that the fishing has played out by any means, but it is believed that the fish keep moving to different grounds. The increase in the fishing has been more especially noted in connection with the pickerel. The catch of this class of fish is heavier than ever before. As there has never been any fry of this class of fish distributed in Canadian waters by the American fish hatcheries, it is, therefore, not thought that the increase of the fish is due to the fact that the fry has been set out. It is thought that the fish have increased naturally.

The other fishermen who operate out of Port Arthur report that the fishing has been fair, whilst some report that in certain months there has been an increase in the fishing.

This fall, with the tug "Gordon Gauthier," he visited all the fishing stations of his district, which extend from Port Arthur to Heron Bay. He inspected all the nets between this place and the eastern point. In discussing the setting of nets in Nepigon Bay with the fishermen, the men state that, in their opinion, these grounds should be reserved, owing to the fact that the bay is the natural spawning grounds of the fish. Therefore, smaller fish are caught there. After fully going into the matter he thinks that it would be wise to discontinue the fishing in the Nepigon Bay section.

At Rossport, the fishing has been fair, and the returns at the end of the season will show that the fishing has been almost as good as last year. In fact F. Bowman reports that the returns in the Rossport section this summer has been a little better than during the past few years. The "Beatrice," owned by Mr. Bowman, has been fishing out in the lake this season. This has been an experiment, but it has proved to be profitable, as much better fishing results than in the bays.

At Port Coldwell, the fishing has been light during the summer, and it was not expected that the catch would be equal to that of last season.

However, it may be stated that the fishermen are doing better throughout this district than ever before. From information gleaned, he learned that during the past few years the fishermen from Port Arthur to the east are making money. They all have their bank accounts and if the fishing is not quite up to the average, still the prices have advanced until now the fishing is carried on at a much greater profit to the fishermen themselves. At Rossport, the concern known as the

Nepigon Fish Co. is composed of almost all the fishermen of that section. They have a man paid to look after their business, and they all come in for their share of the profits after the fish have been sold.

In discussing the fishing with the old-time fishermen of this section, they state that the fish are still in Lake Superior, but that owing to the migrating of the fish, they have gone to other grounds. They come back at intervals, and at times exceptionally heavy catches are noticed. A case was instanced last fall when a fisherman went to raise a pound net. He found that the net was filled, and that he secured more fish during that one lift than he had caught during the whole summer season. He had several excellent lifts, when the fishing again became poor.

The cost of fish in this place has increased considerably during the past few years, until now whitefish and trout retail at about 12 cents a pound. But now the profits do not all go to the dealer, as the fishermen are getting a much bigger price for fish than ever before. The Canadian markets during the past few years have also grown at a reasonable rate. At Port Arthur and Fort William the consumption of fish has greatly increased. Ten years ago there was but a combined population of some eight thousand people living at the head of the lakes, now there are almost forty thousand. At Fort William, Thos. Craigie has opened up a fish store, and almost his entire catch is disposed of to the citizens of that city. In Port Arthur, Bowman & Co. and the Dominion Fish Co. retail fish, and they dispose of a large amount of fish in the city. There are also a number of the smaller fishermen who dispose of their fish to the meat markets, and who also do some peddling.

Re Sale of Fish.

After a careful inspection of the fisheries he finds that the large portion of the fish caught in this section find their way to Canadian markets. Shipments are made east of here, the Toronto market securing the bulk of the fish, whilst some go as far east as Montreal. Then the C. P. R. take quite a lot of fish on their trains east and west.

The largest shipment of fish from here to American markets are the fat fish, which cannot be marketed on this side. The fat fish all go to the States via Duluth; and they are shipped by the Dominion Fish Co., the Nepigon Fish Co., and Bowman & Co.

Close Seasons.

He thinks the close season on Lake Superior ought to be changed. The fishermen who have been questioned on the matter are of the opinion that the season should be closed from the 15th October to the 15th of November. The present season of November 1st is too late. During the period from October 15th to November 15th the fish are caught filled with spawn, and everyone of the fishermen is of the same opinion that the close season is not the right dates at present to regulate the fishing during the spawning season. It should be changed.

Illegal Fishing.

As regards illegal fishing, seizures were made east of here by the Soo overseer last fall of tug and nets of a fisherman at Rossport.

In this district no mills are established on streams, the saw mills being centred at Port Arthur.

At Nepigon, however, a danger is felt for the trout fishing Recently the Government has advertised timber berths for sale on Nepigon Lake, and it is feared that the purchasers of the timber might endeavor to bring all the timber to Lake Superior via the Nepigon River. This would destroy the stream as a trout stream, and it is thought that every effort should be made to keep this stream in its present natural state. In view of the fact that hundreds of visitors from outside points come to this district every summer to fish in the Nepigon, the stream is now looked upon as a national stream, and it is felt that it would be a crime indeed to spoil this stream by the running of logs and pulp wood down the river.

Inland Lakes.

Very little fishing has been done on any of the inland lakes of this district this summer; the men who have the licenses deciding to fish during the winter. This is due, in some cases, to the fact that the shipping facilities are not of the best.

Whitefish Lake has produced just as good fishing as in previous years. The holder of the license is very careful not to overfish the lake, and very often he has not fished at all for a season, although holding a license. The fish are more plentiful in the lake this season than ever before.

At Gunflint Lake there has been practically no fishing. At Arrow Lake the fishing had to be discontinued this summer, because of the fact that the Canadian Northern were not operating their trains up to that place. However, the lessee is again operating, he is informed.

At Greenwater Lake, very little fishing has been done. Mr. Black being engaged in cutting roads, so as to get his fish to the C. N. R. Some fine fish have been taken out of the lake.

At Lac Mille Lac, the fishing has not been carried on very extensively. The fall fishing is always better there.

Overseer Thomas Johnston, of Michipicoten Island, reports that the fishery laws have been well observed on Michipicoten Island; also along the shore in that district. Not one breach of the law did he see or hear of.

It was reported there that the Department would open the preserve between Gargantua Point and Theno Point next season, but it is the general opinion that it would be well to keep this place closed longer on account of its good qualities as a breeding ground, and the fishermen claim that they feel the effects for a long distance round there. There is no doubt of its being a great breeding ground. Into it comes the Montreal River, Trout Creek, Sand River, Blind River, and Gravel River, besides small creeks, and they all form a grand lot of sand and gravel bays. It is also the great home of the speckled trout, and it is sure a lot of them will get in the nets, for there is good angling on the gravel banks out from the rivers, and as he knows that place so well, he would be sorry to see nets in there for some time yet. The fishing at the Island is nearly the same as last year.

Lake Huron (North Channel)

Overseer J. R. Bradbury, of Blind River, reports that the season of 1910 has been somewhat of an off season for the gill net fishermen in his district. The pound net fishermen have had little better success, but altogether there has been a

Canal at Bobcaygeon.

The Lock, Bobcaygeon.

falling off of 20 per cent. as compared with 1909. The trout was of a very small size in the beginnig of the season, but the October catch was a good size, although few in number. The whitefish are better, but not as numerous as last year, although some of the finest whitefish he ever saw were caught in the vicinity of Blind River this year. There were also some fine sturgeon, but not nearly as many as in past years. The pickerel catch this year is fair, but not up to the average. Black bass seem to be more plentiful in the bay than in any previous year, and if they continue to increase as they have this year there will soon be good angling. In the locality of Blind River and other points, considerable quantities of mullets have been shipped, and appear to be in better demand than in former years. Maskinonge are very scarce, in fact nearly nil in that district. The stringent regulations as to size of pickerel is having a good effect. However, he considers that a regulation by weight would be much better than by length as now. He has seen some splendid specimens of trout, which were caught in the inland lakes north of Thessalon and Blind River, where there is a chain of inland lakes which vary from a few acres in extent to twelve or fifteen miles, and in these lakes are to be found nearly all the different kinds of fish found in fresh water. But the lakes are so numerous and so different in the kinds of fish they contain, that a description of what is in one lake would be no guide as to what to expect in the next. The trout are of a different type from those in the North Channel, being more solid and of a redder color when dressed. In some of the smaller lakes, the much prized speckled trout are plentiful, and of a large size. There is considerable angling done by non-residents, but the greater number secure their license before coming to the fishing grounds. Richard's Landing, on St. Joseph Island, and Hilton, also on St. Joseph Island, are becoming popular among the summer tourists, and with Kensington Point and Campidore Island are fast becoming favorite resorts for the lover of the canoe and the troll and fishing rod, and a more beautiful and healthy locality is hard to find.

The fishing laws have been very well observed during the season, with the exception of two or three seizures of undersized pickerel taken en route.

Partridge are fairly plentiful, and quite a number are being shot, but there is no undue slaughter, so far as he can find, the people being well satisfied with the privilege of a short open season. Ducks are scarce, and with the exception of the Spanish River locality and in the vicinity of the smaller lakes, there was very little duck shooting this year. Moose are reported very numerous, and should supply exciting sport to the lover of big game. The red deer are also fairly plentiful, but are suffering sadly from the ravages of the wolves, which have become very bold, in some cases chasing the deer right into the yards of the lumber camps. A man whom he considered reliable, told him he saw six dead deer one morning in February within a few yards of each other. They had been killed by the wolves and left there, and the prospects are still worse for this winter, as the wolves are becoming bolder every day. Reliable men tell him that the wolves are killing more deer than all the hunters. The fact that only one deer is allowed on one license seems to be discouraging hunters from coming long distances as formerly. However, there are considerable numbers of hunters already in the woods all along the line. He considers the law has been well kept with reference to deer and moose, the stringent regulations as to shipping having made it almost impossible to ship game which have not the necessary coupons attached.

He has endeavored to distribute the placards and books of regulations pretty thoroughly throughout the district, and he believes that where the people are well

informed as to what the law is, they are much more likely to obey it. He finds that the close season for mink and muskrats is likely to have a good effect, and these animals are fairly numerous. The law is being well observed. Beaver are becoming more numerous, but otter are very scarce. These fur-bearing animals are hard to protect in that district, on account of the great extent of rocky timber lands and the many lakes, together with the fact that the skins can so easily be concealed. Any lumber-jack can easily conceal furs in his bag, or turkey in his trunk, and it is hard to tell the trapper from the lumber-jack. However, considering the extent of the forest and lakes, and the distance to which the lumber men have penetrated, and the great number of men employed, it could not be expected but that there would be some lawless characters, and consequent violation of the law. In a district with ninety miles of water front, and reaching north into the forest for fifty miles, he considers the law has been well observed, but no doubt still better results could be obtained by a more thorough oversight by the overseer, which would necessarily call for a larger salary and greater expense account on account of the long distance to be travelled.

Overseer Andrew Hall, of Gore Bay, reports that the speckled trout have been fairly plentiful, quite a large number having been caught in the streams flowing into Lake Huron. He has had some difficulty with owners of mills on streams about putting in slides. The angling for bass was fair, a large number of American tourists having spent the summer months in the vicinity of Kagawong. There were a number of fishing guide's licenses issued to boys about fifteen years of age, which, he thinks, should not be. He would recommend that guide licenses be issued by overseers or other persons selling angling permits, as when the American tourist comes he wants to go fishing at once, and a guide cannot procure a license before he goes at the work.

Ducks were very plentiful this year, but not many shot. He would recommend that the duck season open on September 1st, as some of the best species seem to migrate early in September. Partridge are fairly plentiful, but are being slaughtered by some individuals who have the opportunity to go hunting day after day. He would strongly recommend that a limit be put on the number each person is allowed to shoot.

The game and fishery regulations have been reasonably well observed.

Deer are quite plentiful, and seem to be increasing in numbers in that part of the Manitoulin. There are some moose in the western part of Manitoulin. Fur-bearing animals are very scarce.

Overseer Joseph Hembruff of Manitowaning, reports that the angling for bass is about the same as last year. There has been about the same number of tourists on the lake this summer. There was the largest bass caught this season he has seen for years. Speckled trout was scarce this year. Regarding game, the partridge was about the same as last year but he thinks they should be limited to about four each day as there is some that do nothing but shoot all the time. Ducks are more plentiful than last year. Deer are scarce. The game laws have been well observed this year.

Overseer William Hunter, of Tehkummah, reports that the game and fishery laws have been fairly well observed in that part of the country. He has heard of no illegal fishing. There have been very few tourists fishing in the streams in his district, which he accounts for by the scarcity of speckled trout in the Manitou River, owing to there being no fishways at Michael's Bay and Sandfield Mills. Part of the Bluejay Creek is impassable on account of fire burning the timber down along the banks, and it is almost impossible to get near the creek in some places.

Partridge are very scarce, and there should be a close season for three years, he thinks, or they will be extinct in that part. The settlers recommend the same course, as there is not one partridge now where a few years ago there were dozens. He was in the woods for a couple of weeks, and only saw five or six partridge in that time. Deer are there in fairly large numbers, but he would recommend changing the open season from the 15th November to the 1st December, as there are deer wounded and never found, as they cannot be followed on bare ground, and if the season were later there would be snow on the ground and they could be followed, and consequently there would be fewer dead deer in the woods. He would also recommend that game and fishery overseers sell hunting licenses instead of the township clerks, as they would then know who had licenses and who had not.

Overseer David Irwin of Little Current, having been in charge of the patrol boat "Vega" all summer, is not able to give a very full report of the game and fisheries in his district, but says that from what the fishermen have told him, the fishing has been as good as usual, and the fishery laws very well observed. As to game fish, he finds that the tourists between Penetang and St. Joseph's Island, with a few exceptions, were well satisfied. The guides in most places are a great help in the enforcing of the laws.

He thinks deer in that district are on the increase. Ducks are more plentiful than they have been for years. The last two years of close season for partridge have had the desired effects, as they are now quite plentiful, but he would recommend that the number to be shot by each person be limited, as he knows of some who shoot altogether too many. The game laws have also been well observed.

Georgian Bay.

Overseer B. A. Dusang, of Fesserton, reports that the 20th April to the 31st October, 1910, angling has been as good as in 1909. The tourists were more numerous. He sold $406 worth of angling permits—about $100 worth more than the year previous. He only got those who happened to slip past at the Bridge and again at Penetang. The only kick he heard from tourists was that there were too many coarse fish, such as pike and suckers, and they would like to have them thinned out.

There has been quite a lot of illegal fishing with trap nets. Since the 23rd January he has got 13 trapnets and leaders, and a leader without the trap, and also over 500 yards of gill net and a night line 100 yards long and 29 hooks, and destroyed everything on the spot. He had one conviction for illegal fishing. He says it is pretty hard to catch those fishermen, as they know his boat (the "Florence") at all times. He is on the search every day it is fit to be out, but the islands are great hiding places. He does not think there is any inside of the angling line, as he drags all over. The fish caught is about half consumed in Canada, the other half going to the United States.

On Nov. 26 he seized 26 yards of trout net, 6 feet from cork to lead at Lake Island. Total of gill nets up to date, 1,000 yards.

Ducks are scarce so far this season, and they are keeping outside until cold weather sets in. Partridge seem to be plentiful. He seized eight steel traps and a patent wooden box for mink. When a mink goes in he sets the trap for the next one.

There are not many deer hunters so far, and he has sold only a very few licenses. He thinks there should be some way to prohibit firearms coming into the country. Those who bring them in seem to get off in the woods and shoot away,

and one never can catch them, as they get up on those streams in the back woods. Their guns ought to be taken away from them at the Falls and returned when they go back.

There are many complaints from trappers on account of the mink season opening the 1st of December instead of the 1st November.

Since the 20th April he has covered over 4,000 miles with the "Florence."

Overseer James Hewitt, of Honey Harbor, reports that the rod fishing was very good during 1910, but there is no net fishing in his district. The trolling for maskinonge was much better than in past years, some having been caught from 8 to 36 lbs. Black bass and pickerel were plentiful, especially in Crooked and Six Mile Lakes; also pike. The fishing was unusually good in Georgian Bay. The fishery laws were well kept in his district, so far as he knows.

The hunting in November, 1909, was very good, and ducks and partridge were fairly plentiful, but this fall they were much more numerous. There are not many woodcock or snipe. The game laws were also well observed. He had just one complaint of violating the law, and could not find out the name of the offender.

Overseer J. W. Jermyn, of Wiarton, reports that the fishing in that division of Georgian Bay and a certain portion of Lake Huron lying west of that peninsula has been very light. All summer most of the fishermen did not clear expenses. Yet some of the old fishermen say fish are as plentiful as in former years. However, he is of different opinion, and believes the fish are becoming more scarce every year.

To remedy this state of affairs, he believes the time has come when both Dominion and Provincial Governments should establish Fish Hatcheries in all suitable locations on the Great Lakes for the purpose of replenishing those waters with fry. Hatcheries can be erected and run with a great deal less expense now than in former years.

He speaks from the knowledge he has of the way their Fish Hatchery there is operated. With the economic means of procuring spawn to supply the Hatcheries and the ever increasing knowledge of Fish Culture, it should require only the immediate attention of the Governments to prevent the depletion of our valuable fisheries.

He is pleased to say that the Game and Fishery Laws have been fairly well observed, only one or two convictions during the year. There are some deer on the peninsula, and on some of the islands in Georgian Bay, but they are not plentiful.

Partridges and duck are more plentiful than in former years. Rabbits are very numerous. All other game and fur-bearing animals are scarce in this Division.

Overseer Henry Laughington, of Parry Sound, reports that the fishermen had a fair catch of lake trout in the spring, but whitefish were scarce. The catch of whitefish in the spring was small. Some were caught later on, but not so many as usual. All fishing was light in September. There was a large number of American visitors in that district this season, and they had good bass fishing and some very fine lunge were caught. All visitors were well satisfied with the regulations. The guides claim they did not have any trouble in getting the visitors their count in nearly every case. The Department furnished him with the Steamer "Pearl" in the spring to patrol the shore in his division, and he found considerable illegal fishing going on with seines and other nets. He confiscated the nets, and had the guilty parties before the magistrate, and they were all fined according to the Game and Fishery Act.

Partridge this season are numerous. Ducks are plentiful, and very wild, on the lakes, not very many being shot this season. Deer are reported as being plentiful, and one deer to one man will certainly save a lot this season. If the dogs were stopped for a couple of seasons, it would make the deer more numerous; but it would be more dangerous to the hunter, as there are so many inexperienced hunters in the woods who shoot at everything they see moving, which is not necessary, as there is no man that looks like a deer, and if they would look twice before they shoot, it would give them time to think what they were shooting at.

Overseer Thos. McKenny, of Thornbury, reports that trout and whitefish were fairly plentiful in early spring, but the summer catch was an almost entire failure. He has known men to set seven boxes of nets (or about 2,100 yards), and only catch four fish from the lot.

In the fall the fish were unusually late in coming on the spawning grounds. Added to this the weather has been very stormy, preventing the setting or lifting of nets, and consequently the catch has been very light. The law throughout his division has been fairly well observed. He, however, heard that baited lines were being used in the northern part. It is very difficult to locate these lines, as the law-breakers set them on ranges without any buoys or floats of any kind, and, knowing their ranges, drag for and get hold of them; not knowing the ranges, one would have to drag the bay to find them. He would further report that during July and August, while spending his annual holiday at his cottage on the North Shore (about 15 miles from Penetanguishene), he discovered that trap nets were being extensively used, and felt it his duty to stop the practice, if possible. His efforts were fairly successful. He seized and destroyed six of these engines of fish extermination; and here he wishes to offer a suggestion—that overseers should exchange work in their several divisions occasionally, his reason being that if an overseer works only in his own division, he is soon known to fishermen, both legitimate and the reverse, and his approach is heralded ahead by telephone, telegraph, etc., so that when he arrives all is as it ought to be. Now in his own case this summer on the North Shore he was not known as an overseer, but simply an ordinary know-nothing tourist, and this fact gave him a chance to work which a local or known overseer would not have had. The open season is now over, and he regrets to say has been anything but a successful one to the great bulk of fishermen.

Overseer Murdoch Watts, of Byng Inlet, reports that he has had a number of convictions in his division for illegal fishing and hunting deer out of season, but he is glad to say that his division is well rid of illegal fishermen and pot hunters. He has been greatly assisted by Provincial Constable C. H. Knight in every way. They have spent hours and days together trying to run down illegal fishermen and hunters, and have been successful in clearing them out. The bass fishing this year was not so good as in previous years, and he would suggest that a close season be established for a period of, say, three years. He has found his launch "Maggie May" a great convenience for the protection of the fish and game, as it is utterly impossible for any overseer in that section to look after the game and fish as he should, without the services of a gasoline launch. There is such a large portion of water to get over that it would be out of the question for an overseer to do his duty there with a canoe or rowboat. He has travelled some days as far as 70 miles strictly on official business.

Partridge seem plentiful, also deer. He heard a man say recently that he had shot 25 partridges in three hours. He would suggest that the number be limited to five birds a day.

Overseer J. T. Williams, of Penetanguishene, reports that the game and fishery laws have been well observed in his district during the past season. Angling has been very good. Black bass being very plentiful. He sold $218.00 worth of Angling permits.

Very little spring or summer fishing is done in his district. He has 14 licensed fishermen. The catch of trout this fall has been exceptionally good.

Carp are becoming very plentiful.

Partridge are more numerous this year than for several years.

Ducks are very scarce.

Few deer, if any, have been shot in his district.

Overseer John Woods, of Parry Sound, reports that the fishing around Deer Lake has been very good this summer, and the laws have been well observed. The fisherman around Bulger Lake seem to think the fishing just as good as it has been for some time past.

The deer was plentiful this season, and partridge have increased greatly. The tourists did not come in until it was very late in the season.

Lake Huron (Proper) and River St. Clair.

Overseer H. A. Blunden, of Sarnia, reports: In making his report for the year, the month of March being so mild, Lake Huron cleared of ice very early and caused the spring run of fish earlier than usual, and besides, before the most of the nets were set. Judging from the conversations with the fishermen during the year he finds that the spring fishing on the St. Clair River was very good, but not so heavy this fall.

Between the mouth of the River and Blue Point the pound net men have not reported a very heavy catch. In the Kettle Point and Grand Bend section, the men reported a very heavy catch of whitefish.

He thinks that it is a good practice to keep notices of fishery regulations posted throughout the country, as it enables the public to know the legal size and season of fish, and therefore the peddlars know it is no use in buying such goods, even if any were inclined to sell such. As in former years, the fishermen seem to be willing to assist in observing the law. Not until the annual returns of catch are in at the close of fishing season is it possible to know definitely what the catch was for the season. The conditions regarding game have made no noticeable change since last year.

The different varieties of game being about as plentiful as usual, except wild geese, as he has not seen many this season.

There was one violation in regard to fish this season, but the prosecution failed, owing to a technicality in not allowing an overseer to search an unlicensed Hotel without a warrant.

Overseer Fred. Eddy, of Carterton, reports that he can say the year has been a busy year for him on St. Joe Island. In the first place the hounds and dogs had always run as they pleased on St. Joe Island, and it took much time and trouble to stop them, but that is a thing of the past, and the game has increased very rapidly. Moose and deer are quite plentiful there. Partridge has increased and beaver is increasing quite rapidly. Rats and Mink are quite plentiful. The American sports have always made St. Joe Island a resort, and continue to do so, in spite of all he can do without a boat of his own: by the time he can get around they slip back, it being so close to our shore. He expects in the near future to

stay on the ground nights, as well as day, until it is stopped. The fish, as far as he can learn, have been on the increase; the catch has been more plentiful. There was a very large increase in the tourists this season and a great many buildings are being put up for next season. He can say the tourists observe the law very well, and the conditions are improving very much with the settlers. The tourists report the bass fishing was good, catching their number without any trouble. In conclusion he would say, from the lower end of St. Joe Island, next to the American side, a man should spend three days per week from there to Ecko Bay on Lake George, during the season, until the poaching was stopped. He expects to stop it some way.

Overseer D. Kehoe, of Millarton, reports that he has had no convictions this year and has not heard of any illegal fishing in his division. He thinks the Game and Fishery Laws are well observed. The fishermen in his division report the poorest catch in October they have had for years.

Overseer Robert McMurray, of Bayfield, reports that the fishermen in his division have had a fairly good season. In the early part of the summer the fishing was good. The gill net fishermen report trout have been more plentiful this season than in 1909, and they have had a much larger catch this season. The pound net fishermen report the catch not as good as in 1909, but he thinks that, taking the year 1910 as a whole, the fishermen have very little to complain of. Bass fishing was not very good. Perch are plentiful in the early part of the summer, and also in the fall. No illegal fishing has been brought to his notice. He found a gill net set through the ice in the lake in the month of February, and also found another that was set with a boat in the month of June, both of which he seized and destroyed, but could not find the guilty parties. He thinks the several close seasons were well observed.

As to game, he kept a close watch over his district to see that the law was carried out. Partridge are becoming more scarce each year, in consequence of nearly all the woods being cut down. Rabbits are plentiful. He thinks the Game Law has been fairly well observed during the past year.

Overseer D. Robertson, of Southampton, reports that the fishermen in his division have not had a very good year, although considerably better than 1909. The early part of the season of 1910, was very good, the midsummer fishing light, and the fall fishing very good when the weather was fit to lift the nets. The Fishery Laws and Regulations were well observed.

Partridge are increasing in that section. Hares are very plentiful.

Lake St. Clair, River Thames and Detroit River.

Overseer William Boler, of Byron, reports that there have been no violations of the Fishery Laws that he knows of. The Game Laws were broken on October 31st by two men from London, Ont. He searched them and took three black squirrels from them, which he took the same night and delivered to the Alexandra Sanitarium at Byron, as that is a charitable institution. The men gave him their names and addresses, but he has failed to locate them yet. Black squirrels in his opinion are not any more numerous than last year. He saw only one quail and two partridges this year. There were quite a lot of ducks this spring. He saw about sixty sea gulls on the River Thames in April, and the most he ever saw at one time. He would ask the Department to prohibit any male person under twenty-one years

of age from carrying a gun, as they shoot at anything they see, law or no law. He would also ask for a license fee of $4 per annum to be imposed on all those over twenty-one, who desire to carry a gun. He thinks the Game Laws should be amended to have the seasons for everything come in on the same day and go out on the same day.

Overseer J. D. Campbell, of Sylvan, reports that the law has been well observed in his division, and the fish were of a better quality than in former years. He would advise that peddlars should have licenses, say $2 per year.

There are two fishways in his division, both in good repair.

Ducks are very plentiful, also black squirrel. Partridge and quail are scarce. There are quite a number of hunters, but all observe the law well.

Overseer John Crotty, of Bothwell, reports that there was a decrease in the catch of fish, on account of the fishermen not being allowed to export their coarse fish, and therefore, not so much attention was given to fishing as formerly.

There were no fish exported; all were used for home consumption.

No abuses exist.

The close season has been strictly observed, to the best of his knowledge.

No violations of the Act came to his knowledge, therefore there were no fines or confiscations.

There are no mills in his district, so no injury done from that source.

No fishways in his district.

The Game Laws were strictly observed. Rumors reached him of wrong doing, but on examination they proved unfounded, as no one was willing to lay a complaint.

Overseer Remi Laframboise, of Canard River, reports that he has visited the fisheries in his division on different occasions, and he is satisfied that the licensees have observed the laws. He has had but one case of illegal fishing, and thinks they were poachers. He seized the hoop nets, but did not get the owner. The whitefish have been plentiful, but other kinds of fish have been about the same as last year.

Ducks have not been quite as plentiful this last spring as last year, but he noticed about the beginning of September, that grey ducks were very pentiful in the marshes. He noticed a few bevys of quail about the latter part of August. As for black and grey squirrels, they have almost disappeared. Muskrat have been very plentiful last winter, and the price very high. He would recommend that a small fee be charged to those who would want to hunt them; it might do away with the destroying of muskrat houses.

Overseer Richard Little, of Wallaceburg, reports that the angling for black bass, pickerel, and maskinonge in his district has not been as good during the past year as it was in the season of 1909; no other game fish are taken in the waters in his district.

The tourist traffic has been up to the usual average.

It has been reported to him by persons, who he has every reason to believe to be truthful, that some of the Walpole Island Indians have been seining on the bass spawning grounds at night, and sold their catch, some two tons of black bass, on the United States side of the International Boundary.

On account of Walpole Island being an Indian Reserve, and thus outside of his jurisdiction, he is unable to do anything to prevent such fishing from being done, but he would strongly recommend that some means be taken to prevent a repetition of such methods of taking and selling bass.

GAME.

Ducks.

Marsh ducks, including under this head, mallard, black mallard, wood-duck and teal have been in the marshes in his district in increased numbers.

Lake ducks, and under this heading he classifies canvasback, redhead, bluebill, ruddy ducks, and butter-balls, show no decrease, but are apparently about as plentiful as in other recent years.

Partridge.

There seem to be very few of these birds left here.

Quail.

From information received, he believes the number of quail has considerably increased, although there are still comparatively few of these birds now in the district.

Woodcock.

Supply somewhat increased over former years.

Snipe.

There are fewer snipe this year than usual.

Geese.

These birds were quite plentiful last spring, and were to be found feeding in corn stubble, but not many were shot.

Rabbits.

Are reported to be quite plentiful.

Black and Gray Squirrels.

Are reported to be still here in small numbers.

FUR BEARING ANIMALS.

Musk-Rats.

Many of these animals were trapped during last spring and the houses at the date of this report seem to be quite plentiful, indicating that the supply is not decreasing to any great extent.

Mink, Raccoon and Fox.

There are still a few of these animals left in his district, but they are gradually decreasing.

No other fur bearing animals are taken in his district in any quantity.

Commercial Fishing.

No substantial increase or decrease.

Overseer Hy. Osborne, of Dante, reports that the fisheries under his supervision, during the past year have yielded a very small catch, in so far as reports that are in, state, much smaller than previous years. He has put in considerable time on the river during the fishing season in order to ascertain the true state of affairs. Complaint was made to him of illegal fishing, and he took man and boat and made tour of inspection. He found and destroyed 35 hoop or barrel nets. He also reported the matter to the district warden, who interviewed the parties. After considerable correspondence the matter was settled. Other than the above, there was very little violation of the Fishery Laws. The division is in very fair condition as regards obstructions, there being nothing to impede the passage of the fish or free flow of water.

Overseer Theo. Peltier, of Dover South, reports that the catch of fish by the licensed fishermen during the fall of 1909, was better than for some years prior.

Owing to the extremely heavy winter and late spring the fishermen were unable to use their nets until very late last Spring, having only a few days before close season, but the catch was heavy for the short time.

The angling in his division has not amounted to much. Dredging operations at the mouth of the Thames River kept the water too roiley to entice fishermen, and, although he kept careful watch for foreign anglers, none were found this season.

Ducks and other game birds were found in about the ordinary number. Quail are not so plentiful as they were years ago. Lack of cover enables huntsmen with packs of dogs to practically annihilate bevies of quail when found, and I would recommend that the close season be still further shortened to eight days at most, and that only one dog be allowed with each gun.

Lake Erie and Grand River.

Overseer T. J. Briggs, of Bridgeburg, reports that the angling in Niagara River and Lake Erie has been very good, the black bass very large and plentiful, and small grass perch in the lower part of the river numerous.

On Wednesday, Jan. 26th, there was a rifle skirmish near Black Creek with two men from a motor boat, who were dynamiting fish in Canadian waters to take to the United States, and since then, there has been no one seen along the river breaking the Fishery Laws. The Laws are well observed and lived up to in his district.

On August 15th, he seized a row-boat from two Americans, fishing without angling permits in Canadian waters—picked up by patrol boat.

Overseer H. A. Henderson, of Pelee Island, reports that very few fish have been taken in that district, from the fact that the fishing industry is not vigorously prosecuted. No pound nets are now fished, and the fall run of fish was very light. This was chiefly owing to the extremely unfavorable weather through the month of November, 1909, in fact nearly all the fishing that is done there for commercial purposes is during the month of November. The season of angling was very discouraging to the fishermen, many of whom availed themselves of the opportunity, but with very indifferent success. No abuses exist in his district, and no illegal fishing of any kind is carried on. What fish there is caught, is nearly all shipped

Strawberry Island, Lake Simcoe.

Couchiching Park, Orillia—Lake Simcoe.

to the United States, the home consumption being very light. The game continues to be very scarce, and while little or no shooting is done, it does not seem to increase as would be expected, and in consultation with local sportsmen, the scarcity can not be accounted for. The winters have not been exceptionally severe, the cover is good, and feed seems plentiful. He would be glad of advice on the matter. The Game Laws are strictly enforced, in fact the local sportsmen themselves assist in this matter; no pot hunting or illegal devices are used.

Overseer Henry Johnson, of Brantford, reports that the angling in his division has been considerably better for game fish this year, especially black bass, owing, no doubt to the re-stocking there; the number of fines imposed were ten, eight for catching undersized bass, and two for catching pickerel under size. Coarse fish were about the same as last year. The different Deputy Game Wardens have rendered great assistance to him in the past season, for which they have his sincere thanks.

He would recommend fish slides to be installed along the Grand River, as no fish can go up owing to the conditions of the drainage at the present time. Would also recommend that no guns be carried without a license, said license to be arranged by the Department.

He wishes to congratulate the Department on the success of the fish hatchery there this season. The output this year more than doubled that of last, and having assisted in catching and counting, he is in a position to know; and with the new hatchery recently established by the Department at Mount Pleasant, the capacity being still greater, he is sure the output next season will greatly exceed that of this season.

As to game. Muskrats are plentiful. There are two fines in this connection for having hides in possession out of season. Rabbits are plentiful, also black and grey squirrels. Two parties were fined during the close season for hunting on the Sabbath day, and their guns were confiscated. Woodcock seem to be fairly plentiful.

Overseer David Jones, of Welland, reports that the catch of fish for the season of 1910, was about the average. Carp and sheepshead were caught in great numbers; pike and pickerel were fair; and black bass fair and of a good size. There were no summer visitors in that locality the past season. The law was pretty well observed, most trouble being with small boys catching very little fish, and foreigners. He destroyed several wire trap nets, but could not discover the owners.

Ducks have been plentiful; black and grey squirrel are scarce; and rabbits scarce. Sunday shooting was a great source of annoyance, and it was very hard to catch the offenders, as they would go round a tree when he went through the bush. There are several complaints in regard to the shooting of pheasants, regardless of the hens, which he would like to see protected.

Overseer Edward Lee, of Low Banks, reports that the catch by pound net fishermen shows an increase in herring, white bass, and pickerel (dore), as compared with last season; a decrease in pickerel (blue), which fishermen attribute to unfavorable winds during the run; whitefish and sturgeon and other kinds, including coarse fish, about the same as last year, carp excepted, which are on the increase. The catch by gill net fishermen shows a falling off in whitefish, as compared with 1907 and 1908. The herring, which a few years ago seemed to be decreasing, are again on the increase; and the catch by tug fishermen the past

season out of Port Maitland is reported to be the heaviest on record. No great quantities of perch have been caught for years, and appear to be holding their own.

About 95 per cent. of the fish caught are shipped to the United States, balance used for home consumption. No abuses exist. The close seasons have been well observed by licensed fishermen, some non-residents having no regard for same. During the year he fined two men $10 each for fishing with gill nets without license, and two licenses were cancelled for illegal fishing.

Quail, partridge and woodcock are more numerous; cotton-tail rabbit plentiful, and hares and white rabbit now only found in marshy districts. Ducks have not been as numerous to date, as, owing to the very mild weather, they have not come in.

Overseer Kenneth McClennan, of Gravesend, reports that this has been a good profitable season for the fishermen. The spring season was the best they had had for years, the catch of whitefish being exceptionally large. He also noticed a large increase in the amount of Jumbo herring caught. One fisherman told him that about thirty-five per cent. of the catch were Jumbos. These reports bear unmistakable evidence that the quantity and quality of the fish in that district are gradually increasing and improving.

He is pleased to report a vast increase in the amount of fish sold to the home market. The fishermen are sparing no expense in supplying the local demand, having this summer built large freezers where the fish can be stored and held until the catch is too small to supply the trade. One successful fisherman informed him that he had not shipped five tons of fish to the American market this year.

The close seasons have all been well observed, as well as all other Fishery Laws and Regulations.

The Game Laws so far have been well observed. Black and grey squirrels being the only game around there, are becoming very numerous, and the sportsmen are beginning to see the fruits of protecting them, and are regarding the close seasons as the proper thing.

Overseer James McVittie, of Blenheim, reports that the past season in many respects has been a most peculiar one, from the fisherman's standpoint, and cannot be classed as up to the average as regards the catch. The early cold weather and heavy storms last fall caught many with twine and stakes still in the water, which they were unable to get, although the catch was fair up to that time. The spring fishing on the whole was very poor, although the catch was good in May. The poor luck in the catch was to a great extent compensated for by the increase in price. The angling season was marked by an increase of 300 per cent. in number of licenses sold. Carp fishing in Rondeau Bay has been good, both in quantity and price. The laws have been very well observed, not a single conviction. In the early spring several complaints of an authentic character reached him of Americans fishing in Canadian waters off Rondeau, in some instances as close as ten miles from shore. This state of things seems to suggest that one of the patrol boats should be laid up in one of the Lake Erie ports, where the season opens earlier than in other lakes.

Overseer J. S. Smith, of Port Rowan, reports that the seine fishing, in both the inner and outer bay last spring was up to the average in all kinds of fish, but this fall so far it has been very light, owing, he thinks, to the very mild weather. The gill net fishing out of Port Dover and Port Burwell for the season, he thinks, will be quite up to the average. The bass fishing has also been up to the average he thinks for the past season, there being a large number of tourists there, and the

revenue from the sale of angling permits as large as other years. The Law has been fairly well lived up to, there being only one violation of consequence in the seine fishing. This was reported to the Department, and the license was cancelled. He thinks it would be well not to allow the carp seine fishing to run later than the 10th of May at the latest, as he believes the dragging of the nets in the bay after that, seriously interferes with the spawning of the bass.

Ducks have been very numerous in the marshes, but the shooting on the bay has not been up to the average. The partridge are very scarce in that section, but the black squirrels are very numerous, and in some sections have been very destructive. He thinks it is a great mistake not having the open season the same for partridge and squirrel. He also thinks the plover and duck open seasons should be the same and that it would cause considerable less trouble and expense in looking after it.

Overseer James Vokes, of Nanticoke, reports that as a general rule the fishing has been exceptionally good, both for gill nets and pound nets. The tug men all report large catches of whitefish, herring and blue pickerel, and the tugs have been in commission the whole season, and good prices have been realized. No infractions of the law among the tug fishermen licensed by him in his district have come to his notice.

The pound net fishing has also been very good. During the month of November, last year, the whitefish were very plentiful, and some 40,000,000 whitefish spawn were taken from the Nanticoke fishery to the Pennsylvania State Hatchery at Erie. The hatching was very successful, and immense quantities of fry were put into the lake. His licensees are unanimous in the opinion that these large quantities of fry which are being put into the lake of late years are responsible for the improved state of the fisheries, and are very anxious and willing to do all they can to assist the officials from the hatcheries in the performance of their duties. Herring were about up to the average for the pound nets, blue pickerel were plentiful and yellow pickerel (dore), were above the average of the past few years. Unusually large numbers of white bass were present along the shore during the months of August and September, and owing to the protection given to the black bass, they also appear to be increasing in numbers. Rather more sturgeon than usual were caught in the eastern portion of his district, but the western portion of the county reports below the average. Coarse fish were very plentiful, especially carp and suckers, and the perch fishing was well up to the average.

The angling in the Grand River was very poor, owing to high and muddy water, during most of the angling season.

Black squirrels appear to be more plentiful than usual and the short open season now in force will doubtless tend to make them still more plentiful another year. He has not heard of any infractions of the law about shooting squirrel out of season as yet, and has posted notices announcing the change in the open season.

Muskrat were very plentiful last winter, but he imagines they will not be so plentiful the coming season. He reported two infringements of the law, both for taking muskrats out of season. In each case the party was fined $5.00 and the money and hides forwarded to the Department.

Duck-shooting on the Grand River was very good.. There appears to be some feeling against the use of "pump" guns, as not giving the duck any chance at all.

There is also a very strong feeling among the sportsmen, because the woodcock season does not open until the 15th October, because the woodcock move south before the season opens, and our friends on the other side get all the benefit

of the shooting. The woodcock was quite plentiful along the Grand River, but they had all left before the sports could legally shoot them, and they think the season should open on the 1st of October, to give them a chance.

Lake Ontario and Bay of Quinte.

Overseer Angus Brisbin, of Picton, reports that he has in his division forty-one gill net fishermen, six fishing hoop nets, and four night lines, and he has no fault to find with the manner in which they have observed the law. There has been a great deal of windy weather this season at the Main Ducks, which prevented the usual catch of fish, but the fishermen report a very good season. He has made four trips to Main Ducks this season, and at one time had to stay five days on account of a wind storm. He would here suggest that fishermen be allowed more horse power in their boats when they have such storms to contend with. He has eleven horse power in his boat, and finds it hard to make any headway, and he does not know what he would do if he had just eight horse power, as they have, and a load of wet nets and fish. He has known them to have to throw part of their load of fish overboard to reach shore. He has gone over 1200 miles this season. There is very little angling done in this district, and he sold only four permits.

Overseer D. Conger, of West Lake, reports that the catch of whitefish and salmon has not been as good as last year on account of bad weather in the spring of the year. As the fishermen only fish about three months in the year in his division and that in the spring. He has been over his territory on different occasions and he is satisfied that the licensed fishermen observed the laws. Angling has been good in West and East Lake. He seized about six or seven hundred yards of gill nets in West and East Lake, but mostly in East Lake, but hard case to find out the owners of the nets, because they do all of their illegal fishing at night.

In regard to game, there was any amount of Ducks in East and West Lake in the spring, and fall of the year. Muskrat was plentiful, trappers got as high as one dollar apiece for their skins. He had three parties fined for trapping in muskrat houses last March. Partridge are increasing, and also black squirrels. The Game Laws have been fairly well observed.

Overseer P. W. Dafoe, of Napanee, reports that the catch of fish of all kinds in these waters seems nearly the same as last year. The price is high, and the fish largely go to foreign markets. The spring of 1910 opened so early that the run of pickerel was practically over before the close season began. The people living at Lime Lake, in his division are asking to have some whitefish put in that lake, saying it is just the home for whitefish, being deep and springy. He thinks it would be well to have a hatchery on the Bay of Quinte.

Re Game.—Deer, from reports coming in, are not so plentiful. He thinks the wolves have more to do in thinning out their numbers than the hunters. There are not so many going out to hunt, as in former years. Perhaps the one-deer law has something to do in keeping them at home. Partridges are very plentiful. Ducks hold their own in point of numbers. Muskrats are numerous, judging from the houses they are puting up. Mink and black squirrels are holding their own in numbers. A small fee for trapping licenses he thinks, would work well. In his division during the year now closing, five hoop nets have been seized, two for fishing without having tags with owner's name on, as required by law, and three in closed season. He thinks this is the whole of the law breaking in his division, but in other waters he has alone, and also with help, seized some twenty nets for illegal fishing.

BROOK TROUT

(*Salvelinus fontinalis*)

Overseer R. C. Fowler, of Emerald, reports that his appointment to office coming in the month of March, placed him in rather a difficult position. Most of the applications for licenses had been made through his predecessor, some of the fees having been paid, and some not. No adequate record of these transactions was furnished him. It therefore meant a good deal of work to get things straightened out.

The commercial fishing in that district has been very poor this season. Fishermen hardly cleared expenses during the first half of the season. Whitefish particularly being almost a minus quantity. Salmon trout were a little better, in fact they saved the situation for the fishermen this season. The fishermen realise that these salmon trout are the product of the hatcheries.

The latter part of the season, both whitefish and salmon trout have improved. Taking the season as a whole, the catch will be much below the average.

The anglers had better luck, although they have seen better fishing, most of the anglers seemed pretty well satisfied. Two licenses were granted for the catching and sale of minnows, instead of one as last year. Both anglers and guides say that this position has been the means of having a better quality of bait supplied.

The Regulations have been well observed. A few fishermen showed some disposition to infringe, but on being cautioned they gave no more trouble. The patrol boat under the able management of Capt. Fleming, is of great service to the local overseers in having Regulations observed.

A great annoyance and loss is caused the fishermen by the eels. They eat up fish out of the nets, and in so doing snarl up the net so that it takes hours of hard work picking out these knots. Between loss of fish and time, it means a lot of money every season. They also suck up a great deal of spawn, almost living on it during the spawning seasons. There is a time every year when these eels come in on the sandy shores. He would suggest that a limited number of fishermen be allowed to seine them. If a limited number only were allowed this privilege, there would be good money in it, and they would be very careful not to abuse the privilege, for fear of losing their license. At the same time no injustice would be done by granting this privilege, as all fishermen would benefit by the destruction of these pests.

He would also suggest that it would be better to have the open season for plover and snipe the same as for ducks.

Overseer E. R. Fox, of Northport, reports that he has patrolled the waters in his division as often as he thought necessary, and he found the fishermen obeying the law, and has hardly had a complaint this year. The hoop net fishing was as good as last year, but the gill net fishing for whitefish has been very poor, as the month of October was very warm and there were no heavy winds to clear the weeds out of the bay, and the whitefish go to the top of the water and the nets to the bottom, so do not catch them. He thinks they are just as plentiful as last year. There were many more anglers in his division than last year, and they report good fishing.

Re Game.—Ducks are quite plentiful and of a good quality—much better than last year. But in his judgment the law for them is not very good, as the open season for ducks is the 15th September, and for snipe, plover and mud hens the 1st September, which gives persons a chance to hunt in the marshes and a chance to kill now and then a duck, as an overseer cannot be in the marshes all the time. He thinks the muskrats are on the decrease, as they bring a very large price, and there are a great many more trapping them. He would like to see the season closed for a period of two years, and they would be very plentiful.

Overseer Thos. Gault, of Descronto, reports that the fishing for bass was good. The whitefish and herring have not been plentiful, the first part of the season being warm, and they did not come up to spawn, were fifteen days later than last year.

The game has been very good, would advise the season for snipe, plover, etc., same as ducks, otherwise when parties are out for smaller game they shoot the duck before the season opens. He made three seizures during year, nets not bearing tags.

Overseer H. W. Hayes, of Murray, reports in regard to hoop nets that he has quite a few in his division, and the fishermen seem quite satisfied with their catch last spring and this fall so far. He has had no illegal fishing in his district during the past year. Last spring, in the adjoining district, they discovered some illegal bass fishing, and the parties were fined $120, which seems to have satisfied them.

In regard to duck shooting. There was very little of it done in the spring, as there were very few ducks. He would suggest that the plover and snipe shooting commence the same time as duck shooting. As it is it seems to be an excuse for carrying a gun, as it is ducks they would really like to get, plover and snipe being very scarce. The ducks have been very plentiful this fall. One man told him he got seventy in two days.

He has had a number of complaints from outside parties in regard to monitor shooting, and he wishes the Department would decide whether a monitor comes under the head of a sunken punt or not. He has had to warn parties several times about the distance of 200 yards from shore.

Overseer Henry Holliday, of Wolfe Island, reports that the angling in that district for the past season has been the poorest for some years in the first part of the season. The catch of bass was very small in comparison with former years, owing to the shad staying in deep water, and they being the principal food for the bass, the bass stayed in deep water when they should have been in shoal water, where they would have been much easier to catch. He thinks the rough weather had a good deal to do with it also. In July there were only ten or twelve fishing days, the weather being too rough. The fishing in September and the first half of October was better than for years. Other fish are very plentiful, and the anglers say they have had better catches than other years. There were not so many anglers this year as formerly in that district, a good many going to the back lakes and down the Rideau Canal, where the fishing is just as good, and no rough weather to interfere with the fishing.

Overseer E. M. Huffman, of Hay Bay, reports that this has been one of his busiest seasons, more violations of the fisheries having occurred than usual. On April 5th he seized one set of hoop nets, sunken without any tag. On June 8th another hoop net the same. On August 25th about 1,000 yards of gill net. On September 29th another seizure of about 1,000 yards or more. On October 17th about 600 yards of gill net and one punt boat, all belonging to parties fishing without license. The parties in the last two seizures were known, and are being dealt with by Captain Hunter. Parties operate under cover of darkness, and it is almost impossible to catch them.

Maskinonge have been scarce, but bass were in abundance, and there were more anglers than usual. Two bass were caught weighing 4½ and 4¾ lbs.

He issued 23 permits, and some tourists brought permits with them. All declare this to be an ideal fishing place, and one of the nicest of bays. The fishermen report a fair season.

Game.

The game laws were well observed. He had one party fined during the spring for shooting ducks. He says nearly every one speaks well of the shortened season for ducks, and one party said he had never shot so many before in September.

He would strongly recommend a shortened season for muskrats, and thinks the close season should be till the first of March. Furs are becoming so valuable that much trapping is done. He also thinks there should be a license taken for trapping, and that all traps should be tagged, as that would protect the houses better. He judges there are fifteen hundred acres or more of marsh in his district, and rats have been caught up into the thousands.

Overseer John Johnson, of Port Hope, reports that the laws were observed by all fishermen in his district, and there have been no complaints that the law was being broken. He has not found any infringements of the law himself, and quite a number of people came to him to find out the open season for the different game, and also for fishing.

Overseer C. J. Kerr, of Hamilton, reports that spearing in Burlington Bay during last winter through the ice was enjoyed by a larger number of men whose occupations do not provide them with work in winter. Of course some do it for sport alone, but not many. This winter spearing is a great help in keeping down the carp, as one man speared 600 lbs. in one day, which proves that the carp are not lying dormant during the winter. He judges that the catch of carp and pike would be about 600 lbs. for each man, and as there are 157 men, this means 94,200 lbs., and, as far as he knows, no violations were committed among the spearsmen.

The fishermen in Lake Ontario fronting on Wentworth Co. had about an average catch of whitefish and trout. The catch of herring during the fall of 1909 fell off on shore, but those who fished well out in the lake did well. The catch promises to be a better one this fall, both in size and numbers, and taking all in all, the catch this year is satisfactory to the fishermen.

The lot system in Wentworth, especially on Burlington Beach, as well as the shore of Saltfleet Tp., east of the beach, is the only system workable, taking into consideration the larger number of small fishermen who only fish, say, 1,000 yards of net near to the shore. He holds in his possession a paper signed by all his fishermen, with the exception of two, stating they are satisfied with the present lot system in the County of Wentworth. These two dissatisfied fishermen would not be satisfied if they had the whole of Lake Ontario fronting on Wentworth County to themselves. However, owing to the death of Daniel McGuin this fall, a very old fisherman, he says he will be able to regulate the lots on the beach to the better advantage and satisfaction of the fishermen. The angling and trolling for pike in the bay has come up to the usual good fishing. One man and his wife caught forty pike in one day with chub bait, and reports say that the bass fishing was fairly good at the piers. He got no complaints of a serious nature of a shortage in black bass. The black bass are in the bay, if the so-called sportsmen only knew how to catch them.

Re pollution of the waters of Burlington Bay. Owing to the sewers of Hamilton running into the waters of the bay by the inlets, it looks to him as if in the near future the south shore of the bay will be in a bad shape to find any

fish, as, in some of the inlets at the present time, all the fish are driven out by the acids that come from the wire factories in the east, and this should be stopped, and such sewerage treated through the sewerage interception works there.

He had two seines working in Burlington Bay, and about 30 tons of carp were taken out this year. He also paid several visits to the back part of Halton County for the purpose of organizing the protection service in that county, the result being that R. M. Brown, of Milton, was appointed game and fishery overseer, in whom he has great faith that he will prove an efficient officer: two deputy wardens have also been appointed to that county.

Offences against the Game and Fisheries Act have been less this year than ever. He had occasion to lift a large net in Lake Ontario, where one of his men persisted in fishing on another fisherman's lots. This, with two duck shooting cases, was the only serious breach of the Act.

He has paid particular attention to the transportation of fish and game. He seized several boxes of trout and whitefish which contained a very large number of undersized fish, and he hardly ever opened a box without finding one or two undersized. He inspected about five hundred boxes during the season, and found a great improvement over 1909. Hamilton is a good place to catch fish and game in transit, as it is one of the distributing stations for the express companies. A large number of fish and game, furs, etc., etc., come through. He seized a number of deer and moose heads, skins, etc., shipped by taxidermists who are in the shipping business, but he hopes to have them in line in due time.

There are no fishways in his district, but there are two mill dams in the County of Halton, one on the 12 Mile Creek at Zimmerman Mills, about ten miles from Bronte, where this creek empties into Lake Ontario. This is a black bass creek, and is a great resort for this species of fish during the spawning season. They ascend as far as Zimmerman's dam to spawn: 12 Mile Creek is well known as a black bass creek. If there were a fishway at this dam, and the bass could get up, they would have a stretch of nine miles of good stream with two branches running into it—splendid water for bass. He does not think that carp ever gets up as far as the dam, but he saw bass last June in a deep hole close below this dam. The other dam is on Oakville Creek. A fishway on this dam would be of little use.

Wild duck were very numerous this year in the Dundas Marsh, and also in the marshes in Burlington Bay. He thinks it was a good thing to add the fifteen days to the beginning of the season. He found that from the 1st August the teal and summer duck commenced to come, and kept coming and staying in the marshes until the 15th September, the opening day, and some sportsmen bagged as high as thirty-eight the first morning. He thinks the close season should also have been extended for the snipe, rail, plover and other waders, and make all water shooting the same. It seems to him that bitterns and cranes should come under waders, and he hears that some people consider them palatable. Kingfishers should be put on the free list, and shot at all times. As to the duck during November and December of last year, there was any amount of ducks, and during last spring thousands were down at the beach, and right up to the middle of June, but very few in Dundas Marsh. At the present time (October 1st) there are in Dundas Marsh 1,000 ducks in among the wild rice, and if they could be shot they could not be found by the hunters, as the rice is so thick and the water so low. Plover, rail, etc., were plentiful.

Muskrats are becoming much scarcer every year, and the pelts which twenty

years ago only brought from 10c. to 20c. each, are now worth from 70c. to $1 each for spring rats. It appears to him that the open season for rats is too long, and should be shortened to, say from the 1st March to the 15th April. This would give the best results, as the skins are at their best then. He can remember the time when the trappers would trap at no other time. He would also recommend a license put on all trappers. He has paid a good deal of attention to trapping last fall and winter, and has come to the conclusion that winter trapping for rats should be done away with, or else shorten the time. To evade the law, unfair trappers cut holes in the ice on the runways leading to the houses and set their traps therein. This is beyond the law, and the only way to stop it is to close season the winter months for rats. The fur is not so good in fall or early winter months as it is in the spring. The close season for mink, he thinks, is just about right. Last fall some trappers began their operations in October, and he had six offenders fined $20 each and costs, who claimed they could not catch one mink without getting twenty rats. Their operations were out in the Township of Flamboro, in the creeks and swamps, and extended into the Counties of Wellington and Halton, but he got them and fined them, and stopped their illegal work. It is stated by old trappers that the yearly catch of furs in the County of Wentworth reaches the sum of $10,000 annually. This includes every description of furs, and he has no doubt this is an under estimate, as two years ago, in rats alone in Dundas Marsh and the marshes in the bay, $16,000 worth of rat skins was taken out under his own observation, and the pelts sold for 30c. each. And it is claimed that Halton County is better still. And he can safely say that but for his vigilance and doing his duty well on Dundas Marsh and Burlington Bay last winter, by spring there would have been no rats for the trappers to catch.

It is further claimed, and he believes it to be true, that Old Ontario is richer in furs than New Ontario. Some of the trappers in Halton County have stated to him that they give up their usual occupation as trapping season comes round and go trapping, and can easily clean up $600 before the season is over. Men like this have asked him to get a license for trappers, so in recommending this he hopes he is taking a broad view in accordance with trapping sentiment.

The shipping of furs is another matter for serious consideration. The shipping of rats, mink and other fur commenced on the 1st December last year, not only by the trappers, but by the fur dealers throughout the Province, which proved that a lot of trapping was going on in close season, and they were only waiting for the open season to ship their goods, which was evident by their actions. He seized and confiscated several bags of rat skins on the 1st, 2nd, and 3rd, and up to the 5th December last (on Can. ex. car there). He thinks the shipping of furs, even in open season, should be controlled by the Department, or the shipping be held back until the 15th day of December, all furs shipped before this date to be seized and confiscated.

Every man that carries a gun or rifle for the purpose of shooting or hunting game, or uses them for that purpose in the Province should be compelled to take out registration papers to do so. He says the Department could issue registered permits free of charge, or a nominal fee of 25c. could be charged to cover expenses. Also no boys should be allowed to carry rifles under the age of 17 years anywhere within the Province. There is too much of this dangerous work going on at the present time. And he might add that no rifle be used for the purpose of killing game, except deer, moose and elk. This would stop the carrying of rifles by boys in the vicinity of small game, such as plover, ducks, etc.

Deer hunters have stated to him that some restrictions should be put on the number of dogs for each party, say, for a party of six men, four dogs; over this six dogs to a party, as he claims six dogs are enough for any party. This would give two dogs a chance to run each day; of course the other four would be tied up in camp waiting for their turn. The cutting down of the deer to one is a good provision. However, it is necessary to watch the results during the present open season, to detect any defects, if possible.

In conclusion he would strongly recommend the advisability of establishing game preserves and fish preserves for the protection of the fish and game. In that county near by he knows where such a piece of property could be bought, lying near to a body of water belonging to the Ontario Government.

Overseer Thomas Mansfield, of Pickering Harbor, reports that on the whole the fishing was up to the average, some of the fishermen doing better than in the previous years, while some have not done so well. Angling was about the average. During the season he visited the western end of his division on several occasions and found everything in order; he also kept a close watch on Pickering Harbor, and found no illegal fishing, although he thought several times that some parties had intentions that way, but perhaps his presence put a stop to it. He also visited Oshawa and vicinity, also Whitby, and found everything O.K.

He thinks there is no doubt but what whitefish and salmon trout are increasing in numbers in these parts, but the fishermen did not seem to strike the herring in any quantities.

Ducks of all kinds were up to the average of other years, also muskrat and mink.

Overseer James C. May, of St. Catharines, reports that there is a great increase of whitefish and herring in his district. There has been very little illegal fishing done there, as he has only confiscated two dip nets and one short gill net and seven spears.

Game is not very plentiful, the only game birds being pheasant and grey squirrels.

There are only a few fur-bearing animals, such as muskrats, which are very scarce.

On the whole the law has been well observed.

Overseer J. A. Moore, of Trenton, reports that bass and pickerel were unusually plentiful during the last season, and there were not a great many infractions of the law, though many attempts. Ducks seemed to be in large quantities, but were soon run out of the local waters by hunters. The hunters in this section, in so far as ducks are concerned, make no pretence of carrying out the regulations as to the manner of shooting, and make a lot of trouble. There has not been so much complaint in his district as in the ones immediately adjoining it. Hunters go out beyond the two hundred yards limit, in some cases as far as half a mile, and even a mile, with monitors and large flocks of decoy ducks, and the result is that those hunting according to the law get no shooting, and the decoys being placed in the feeding grounds, the ducks are scared and driven away. It is very difficult to catch these persons, who always go in pairs, and unless the warden has a fast boat or just happens to know them and catch them as they land, they are up and away.

He would recommend the abolition of monitors entirely, placing such boats

in the category of sunken punts, for such they really are, and also shortening up the distance of placing decoys from 200 yards to 50 yards. The offences are almost always committed in this respect by hunters who hunt for sale, as the real sportsman seems desirous of obeying the law and preserving the game. He would strongly recommend the prohibition of sale of wild ducks, as they are certainly not nearly as plentiful as in former years, and are being slaughtered and driven away by pot hunters.

He would also suggest that the snipe season be the same as the duck, as he is satisfied that many a black duck has been shot before the season, and the excuse for carrying a gun was that they were hunting snipe.

The partridge are pretty plentiful, and a good number shot. It would be a wise regulation, it appears to him, if the season were shortened so that the open season be from the 15th October to the 1st November so as not to run into the deer season, when a great number of birds would be killed which would not be otherwise.

Deer are reported in the north part of this district as being very scarce, and the wolves very bad, which may in a measure account for the scarcity. The settlers and farmers are strong advocates of the abolition for a number of years of the use of dogs to see if there will be any increase in the number.

Overseer William Sargant, of Bronte, reports that he has been over his division carefully, and finds the catch about as good as last year. He does not think there is any improvement to speak of, except in whitefish. He saw one catch with a small piece of gill net of about twenty-five or thirty fish, which would average from five to eight pounds each. There had not been the like of it there for many years. Trout was hardly so plentiful, but the fishermen would realize about the same amount of money, as prices were much better. The fishermen all use from six to seven inch mesh for trout, and find it pays much better than a smaller mesh. Herring fishing is the principal industry of the division, and he is pleased to report that the herring are getting larger every year. He has been over his district several times during the year, and always found the law well observed. There is a desire on the part of those engaged in fishing to observe the law. Angling in the Twelve and Sixteen Mile Creeks has been about the same as former years. He has noticed some very nice black bass being caught. He mentioned in some of his former reports that he was afraid that carp would ruin the angling in those streams, but he has greatly changed his mind, as he cannot see that they are doing any harm.

In regard to game, there is very little in his division. He is pleased that the law in the County of Halton forbids the shooting of squirrels and partridges, and he is quite sure if this law remains in force there will be a marked improvement in a few years. He thinks the law in regard to duck shooting should be changed so that no man could shoot more ducks than for his own use. He cannot see much sport in a man shooting ducks to sell, as some men make a business of it, and he thinks it should be stopped.

Overseer J. W. Taudrin, of Kingston, reports that the angling in his district for the past season has been the poorest in years, the catch of bass being very small in comparison to last year, owing to the chub staying out in deep water, and they being the principal food of the bass, they also were in deep water when they should have been in shoal water. Rough weather had a good deal to do with it also. In the month of July there were only eleven days that could be called

angling weather in the best waters of that district. The bass were biting well during September and the fore part of October. Other fish are quite plentiful, and good catches have been made. The shipments of fish to the American side have not been as large this year as last. There was a falling off in whitefish and lake trout, caused by the continued rough weather during the summer. Herring were very plentiful last fall, and large shipments were made from there to Cape Vincent. There were not as many anglers this year as formerly in that district, a good many of them preferring the back lakes and the Rideau River, where rough weather would not interfere, and the angling was just as good. As the new international treaty is not likely to come into force next year (if ever), he would strongly recommend the granting of licenses for the catching of sturgeon. Their waters there are full of them, and American fishermen are licensed to catch them on the American side, and it is causing a lot of dissatisfaction among the fishermen in that vicinity to see the Americans catching sturgeon a few hundred yards from them, and they are not allowed to do so. He says they are simply breeding and feeding them for the American fishermen.

The laws have been well observed, and he has had less trouble than in former years.

Ducks and other water fowl are more plentiful this fall than for twenty years. Muskrats are becoming very scarce, and he believes the season for trapping and hunting them should be shortened, or a close season be established for a year or two.

Overseer Albert E. Tarry, Toronto, reports that he has had no returns from the fishermen regarding their catch of fish, but he is of the opinion that the catch will not be as good as last year. Salmon trout, whitefish and blue-backed herring are the principal fish in the lake waters of his district. He knows that salmon trout and whitefish have been scarce, and there has been hardly any herring. He can account in no other way for the scarcity of fish than the dirty water caused by the quantity of sewage that pours into the lake, and the dirt that is taken up by the dredge out of the bay waters and carried out and dumped into the lake. Angling is very poor. There have been two prosecutions for illegal fishing during the year.

There have been fewer ducks this year than last, which he thinks is owing to the condition of the weather, which has caused them to continue their flight. It has been a very mild fall, and they did not appear to stop here as they have in other years. Muskrats are also becoming very scarce, not but what there is plenty of feeding ground for them, but the fur is bringing a very high price, which is such an inducement to trappers that there are few rats left.

Overseer E. A. Titus, of Wellington, reports that bass fishing in Wellers Bay has been far above the average this season, and also in Consecon Lake; pickerel (dore) were quite plentiful in both waters. Whitefish and trout in Lake Ontario were not as plentiful as last season, which the fishermen attribute mostly to the weather and winds. Carp are becoming quite a nuisance in Wellers Bay. There has been very little illegal fishing, and what has been done has been by fishermen coming from other districts. On the whole the fishermen have behaved remarkably well.

Re Game.—Muskrats are numerous in the bays, there having been very little illegal trapping, and only one conviction. He watched the muskrat houses very

" Bide-a-wee "—Honey Harbor—30,000 Islands of Georgian Bay.

The " Naiad " at Beaverton.

closely. Ducks are very plentiful, partridge scarce but on the increase. There are very few mink. He has not seen a black or grey squirrel in that vicinity for years.

Overseer R. J. Walker, of Port Credit, reports that the year just closed has been the best for trout and whitefish for some years. Herring seems to be very numerous, the fishermen having some very large catches. The ciscoe seems to be on the increase, but the fishermen have to go farther into the lake for them.

Angling in the Credit River seemed to be on an average with other years, and the law has been fairly well observed. A sharp lookout has to be kept, as the angling is carried on over a large territory.

The Game Law, to the best of his knowledge, has been well observed. With the change in the duck and squirrel season, people who have not made themselves acquainted with the change no doubt have violated the law ignorantly. Outside of this the law has been well observed.

Overseer Frank Worden, of Courtice, reports that during the past year the fish caught in his district, other than herring, have been very scarce. The herring catch by one licensee, however, has been very good. A few pike have been caught. Other than these the fishing has been practically nil.

The game has been very poor, except wild duck, which has been fairly good, and better than last season.

Some trouble has been encountered with duck hunters this season, because of the change in commencement of the season from September 1st to September 15th. He would recommend that if possible the season be made from the same period in each year.

Counties Frontenac, Leeds, Prescott, Russell, Carleton, Renfrew, Lanark, Grenville.

Overseer Samuel Andrews, of Micksburg, reports that he has kept a close watch in his division, and found the fishery laws fairly well observed. He destroyed three gill nets which were illegally set, but was unable to find the owner. Thirteen licenses were issued for fishing for coarse fish. A small quantity of fish was taken by those to whom licenses were issued, as they were fishing merely for their own use. He thinks fish are on the increase in that county, as angling has been better than in previous years.

Re Game. Deer and partridge are increasing in that district, several deer having been seen where some years ago there were none. Beaver is increasing, and is coming down the river and small streams further into the settled parts of the county. Muskrats and other small fur-bearing animals are scarce, owing, he thinks, to the high price of fur. Trappers were out last April on every stream and marsh in the county, and very few muskrats escaped being caught. He thinks it would be better to protect them for a couple of years to give them a chance to increase, as they will soon be all killed, and will be a serious loss to this county.

Overseer Melzar Avery, of Sharbot Lake, reports that the fishing in that locality has been good this season, and thinks it could be improved if the Department could see its way clear to have the mud cats and ling taken from the lake, if possible, as they are very destructive on other fish. He also thinks the close season for salmon in that locality should be the 1st October to the 31st October, as that is the time they spawn in those waters.

Overseer George Barr, of Harrowsmith, reports that angling in Rock and Long and Silver Lakes was fairly good, but in Fourteen Island Lake it was not good this year. The fishermen said the water was too high, it being held back by the dam. Napanee has not been as good as usual, also said to be caused by the water. He thinks there is no more than enough fish in those lakes for their own consumption at the present time. He thinks that if pickerel were put into 1st Depot Lake, they would do well there, as there are only pike, suckers and catfish.

Last April he had five men summoned before a magistrate for illegally taking otter, and, with Capt. Hunter's assistance, proved two guilty of each catching an otter and disposing of same to a fur dealer. Each man was fined $20 and costs. He had great difficulty in watching those trappers; as there were no boats there that he could secure, he had to go to Verona, a distance of seven miles, and then row down three miles to the trapping ground, and there is so much drowned land it is impossible to get over it in one day. There were forty trappers around the drowned lands last spring. He thinks it would be advisable to license trappers, and not allow muskrat and mink to be trapped until the 1st of March, and not allow them to be shot at any time. The sports regretted the change from 1st to 15th of open season for duck shooting, as, by the time the 15th arrived, most of the ducks had taken their departure. Partridge is becoming more plentiful since they have been protected.

He has done his best to protect the fish and game in his district during the last twelve months ending October 31st, 1910.

Overseer W. J. Birch, of Delta, reports that the game and fishery laws have been better observed in his district of Upper and Lower Beverley Lakes the past year than any previous year, the reason for this being, he thinks, that the people are becoming better acquainted with the law, and that they are commencing to realize the necessity of protecting game and fish. The dozen cottages that are on Lower Beverly Lake in his division were all occupied most of the season, and the residents report some excellent catches of both large and small mouthed bass. The fishermen on Upper Beverly Lake report their catch for the year very good—about the same as previous years.

Partridge have been quite numerous this fall in that part compared with a few years ago, and ducks also are more plentiful, with the exception of the wood-duck, which will soon be the same as the wild pigeon—a thing of the past. They were very scarce, although he thinks the black ducks and blue bills are increasing a little now every year. The change from September 1st to the 15th for open season for duck is a good one, but would advise it changed again to October 1st, as a great many ducks are not fit for use until then. The black squirrels have been very plentiful in that district, and on account of the scarcity of nuts the farmers have been greatly bothered with them carrying off their corn, and have been complaining because they could not shoot them until the 15th November. At that time they do not get very far away from their holes, and it makes it very hard to get any. He would advise open season for black and grey squirrels the last fifteen days of October. The muskrats were not so plentiful last spring, and he thinks they should have more protection, also the mink. He considers that two weeks is long enough time to allow muskrats to be taken—say the first two weeks in April. If this was in force for even four or five years to let them increase some, the lakes and creeks would be much freer of weeds, and more passable.

Overseer Peter Botting, of Fermoy, reports that since his appointment to

office a little over a year ago, he finds that the laws have been well kept, considering the number of lakes in that district, and that the number of tourists have been larger than in previous years. He sold sixteen permits this year, and believes the laws were observed by those parties. He thinks the Department has taken a step in the right direction towards getting the ling out of Wolf Lake, Green Bay and Bob's Lake, where they are so numerous, and towards having bass put in Wolf Lake. But he states that there is plenty of bass in Canoe Lake, Thirteen Island Lake and White Lake, also Thirty Island Lake, in which there were some parties fishing last summer who report that the fish were a good size. He thinks the salmon season should be changed from October 15th to November 15th, as the run is nearly over before the close season comes on. The close seasons in that district have been well observed, and he had only one occasion to enforce the laws during the last year, and that was for catching salmon on Devil Lake with nets.

Deer have been very scarce in his district for years back, but he thinks that in a very few years there will be a good many, as all the hunters go away to other parts, and he knows of only one or two deer having been shot this last three or four years. Partridges are quite plentiful now in that section, owing, he thinks, to their protection for years. Ducks are quite numerous, too, but are very wild. Muskrats are quite plentiful, and the laws are well kept. Mink are very scarce, and hard to be caught. Foxes are numerous, and there are a number shot every year. They are very destructive on fowl, especially on turkeys.

Overseer W. L. Briscoe, of Killaloe, reports that he has kept a close watch in his division, and found a good many less infringements of the game and fishery laws than last year. The most trouble he had was with the Indians, as there are a number of them who do not obey the laws. He has also visited the different lakes in his division, and found that they had quit spearing, as there are no cinders to be found around the lake shores. He also found that the fish in Golden Lake are very scarce, as the trout seem to have left these waters, and there is nothing but pike and suckers. The grey trout and whitefish are getting to be numerous in Round Lake, and are of a large species. He has issued in all fourteen fishing licenses, but most of the parties have not set any nets yet, and those who have set them have set them only for pike and suckers. He destroyed several nets in Golden Lake, but did not find the owners.

Partridge are very numerous in his district, also deer and beaver.

Overseer D. E. Burns, of Pembroke, reports that the Game and Fisheries Act has been well observed this season in his district. He recommended eight fishing licenses for coarse fish, but only a small number of fish were taken, as the parties were fishing merely for their own use. Fish are not increasing as they should, and he cannot account for this, unless it is the large quantity of suckers that frequent the waters and destroy the spawn of other fish. The principal fish that frequent the waters in his district are bass, maskinonge, sturgeon, catfish, suckers and pike. He did not issue any angling permits this season, as there were no non-residents camping there.

There has been a new fishway put in the dam on the Muskrat River in the town of Pembroke.

There were some parties hunting partridge on Sunday up in the township of Fraser, but he failed to find out who they were. He has been informed by citizens of that locality that Sunday partridge hunting has ceased since his visit to that part of the country. The partridge are getting more plentiful under the wise protection now afforded them, which he thinks should be continued for a

few years yet. Beaver are increasing in that part of the country, and are working their way down the rivers and small streams. He located a family of beaver at the head of Becket's Snye on the Ottawa River, where they never have been seen before. He believes that deer are becoming more plentiful, and coming down into the settled parts of the country; and that ducks are decreasing, owing to the large number of sportsmen coming in from Ottawa and other parts. He issued nine licenses for deer hunting. The red squirrels are very plentiful around there, and in some cases very destructive. Muskrats and other small fur-bearing animals are still scarce.

Overseer H. N. Covell, of Lombardy, reports that there has been no violation of the fishery laws, as he has kept a close watch over his district.

The angling has been very good this season for bass and pike. He thinks there is an increase in those fish, on account of the amount of ling taken out of Otter Lake by the Department. He would like to see as many more taken from those lakes. He thinks the close season for salmon is too late, as they come on the shoals from the 15th to 25th of October in Otter Lake. He has issued one dip net license this season for catching coarse fish for domestic use only. There have been no tourists on these waters this season, consequently the prospects are better for another year.

The partridge has increased on account of the Department putting a stop to shooting them for a few years. The ducks are not as plentiful as in former years. The black squirrels have increased in number. The mink are increasing by the close season the Department has put on them.

Overseer J. W. Daris, of Sydenham, reports that the game in his district, especially the partridge, have increased wonderfully, every wood seeming to be full of them and several deer have been seen during the past summer within three miles of our village.

The ducks, however, are scarce, they have changed their breeding ground, the cause of which is owing to the number of motor boats on our lakes. There are fourteen motor boats which run from early spring till late in the fall.

Owing to the cold weather in the fore part of the summer, tourists did not come to the village, therefore he did not sell as many angling permits as last year. The law has been strictly kept in his district. He has not heard of one violation.

Overseer John Devine, of Renfrew, begs leave to report that he has taken reasonable precautions in regard to the game and fishery regulations, and has found no person violating them, consequently has collected no fines. He finds pike more plentiful than last year, due, no doubt, to the fact that none have been caught for sale since early in the summer of 1909. Black bass are not so plentiful as last season, although there were not so many fishing for them this season.

Duck and partridge were plentiful, but he believes too many were killed, particularly partridge. It might have a good effect to place a limit on the number to be killed by each hunter. The number of deer hunters in his division so far seems to be exceedingly large, notwithstanding the fact that they are only allowed one deer this year.

Overseer W. J. Donaldson, of Donaldson, reports that he is pleased to say that the Game and Fishery Laws, as far as he could learn, have been well observed.

No violations came under his immediate notice and he has had no complaints.

No Fishing Licenses have been granted in his division in the past year.

Many of the lakes in that district are well supplied with game fish, and would afford excellent sport for tourists who are fond of angling, though not many have taken advantage of those privileges during the past year.

Deer appear to be plentiful, and he thinks are on the increase. Partridge also are plentiful, while ducks are scarce.

Muskrats are very scarce. Owing to the high price of their fur, they got a bad cleaning out last spring.

Mink, otter and beaver are very scarce.

Overseer Henry Drew, of Long Lake, reports that game of all kinds is more plentiful than for some years. As for the fish in the waters in his division, there was very little fishing done, and only with hook and line, except in Eagle, White, Crotch, Gull, Cross and Dunkin Lakes, which seem to be swarming with small herring. Having gone over those lakes very carefully, he finds the Game Laws have been strictly observed, and no hoop netting allowed leaves plenty of coarse fish in all the small inland lakes for resident and home use.

Having made application for a number of herring licenses for Eagle Lake, he can assure the Department that as they are all residents and farmers bordering on those waters, they only take a very small amount of fish.

Overseer James Fisher, of Sunbury, reports that this has been a very successful fishing season. The bass seem to be plentiful, the tourists almost always catching their limit. The salmon is not quite so plentiful, very small catches being reported. He thinks if the close season for salmon was from the 15th October to the 15th November, it would be a better protection, as they are almost sure to spawn between those dates. This year they were through spawning before the close season started The fishery laws and regulations have been well observed by the licensed fishermen in his district, and also by the tourists who visited the lakes. He sold over 200 permits, besides many had them when they landed. Some complaints have reached him of gill netting in Dog Lake and Loughboro Lake. He visited those lakes and seized five nets. The water is very deep, and it is very hard to locate them.

The ducks are plentiful around his district. The close season for partridge the last three years has resulted in their being more numerous. Mink are very scarce, seldom one being caught. Muskrats are not so numerous as in former years.

Overseer Adam Green, of Diamond, reports that fishing was not so good as last year, the first of the season being very poor, owing to the cold, wet spring. He seized one night line, and had the party fined.

Ducks and partridge were plentiful, muskrat scarce, and mink very scarce. Deer are on the increase, and there are traces of an odd beaver to be seen.

Overseer J. E. Irish, of Vennachar, reports that he has had no applications for licenses for fishing during the past year. He has had no occasion to prosecute for infraction of the Game and Fisheries Act. He has made several visits in his division, and found nothing contrary to the Act. He has posted up notices in various parts of his district.

The law regarding mill refuse in waters was also well observed.

Partridges are reported much more plentiful this season, thanks to the Department. Deer are also more plentiful.

Overseer J. A. Kennedy, of Tichborne, reports that fishermen say black bass are plentiful, only smaller than in former years. Pickerel are not so numerous, and are smaller in size than formerly. There are a large number caught with hook

and line and shipped from there. In the months of June and July he examined several lots and found half of them were very little over the fifteen inches. He thinks the shipping for commercial purposes should be stopped, or the number of inches raised to twenty. He sold thirty-four permits, and these parties reported they had no trouble getting all the fish they were allowed. Ling and bullheads are very numerous, but as the Department is placing hoop nets in Bobs Lake, it will do a lot in keeping them in check. He visited Salmon Shoal on Crown Lake on the night of October 26th with a light. There were two ling for every salmon there that night. The law is being better observed than in former years. He thinks the people are beginning to see that the object of the Department is not to take fish and game from them, but to protect them.

Deer are reported to be in larger numbers in that district than for five years. Mink are very scarce, and muskrat also, owing, it is said, to the winter of 1908 being a hard one.

Overseer E. T. Loveday, of Ottawa, reports that he has made a number of trips throughout his whole district, and has made short trips weekly. Fishing has been fair, some good sized ones having been taken. He had one pickerel that weighed 10½ lbs.; one 40 lbs., 2 or 3 of 30 lbs., and quite a few around 10 lbs. maskinonge have been caught. He caught seven small-mouthed black bass one afternoon, two of which weighed 4½ lbs each. He would strongly urge that a supply of small black bass be put in Lake Deschenes (Ottawa River, some ten miles above Ottawa), and that all licenses be cut off in head waters of Ottawa—Lake Temiscaming.

Any reports he has had of Rideau River and lakes, and his own experience while on a trip from Ottawa to Kingston, when he tried angling on some of the beautiful lakes, go to show that fishing is poor. There is far better fishing within ten miles of Ottawa, in Ottawa River, for bass, etc., and much better up the Gatineau district. He is afraid that if the fishing does not improve, most of the wealthy Americans who come every year will stop coming. Let them once find out that they can get what they want—good sport—in the Gatineau, Lievre, and Pontiac district (and they can within 50 miles of Ottawa—bass, lake, speckled trout and brook trout), and they will come to Montreal instead of Kingston, and come up the Ottawa River in their yachts, then by train to the Gatineau lakes. He fished in five lakes while on his trip to Kingston—lovely lakes and pretty islands, and he caught *one bass*, and he believes he got the only one around, for he (or she) took frog ravenously. This is just a hint. Keep the sports in Ontario if possible.

He has investigated several reports of illegal fishing, etc.

Early in the year Captain Hunter and he took a scouting trip to Pembroke After searching a few places under a search warrant, they struck luck in one store. Stowed away behind a lot of furniture they found a large trunk, which, when opened, was found to be full of fur—muskrat, mink, etc. The owner stated most emphatically that they had got all there was on the premises, but this did not satisfy the Captain, for he figured that, as the owner had already told them about half a dozen lies, he, the owner, was most likely still lying. On an upper shelf, and away back behind a lot of boxes, they found 14 beaver skins. This party paid a heavy fine, and lost all his skins, which were sold for about $200.

Seizures: January 10, Venison. Sent to Orphans Home. One box of fish, sold for $5. Two boxes of fish, sold for .... Twenty bags of skins, sold for $20. January 25, 3 boxes of fish, sold for $7. One box hares.—sent to Institute. January 28, $2,000 worth of fur. Owners paid $400 to settle case. February 6, $1,000

worth of fur. Owners paid $250 to settle. May 12, box of fish, sold for $7. May 17, 1 bag of fur. May 24, 25 muskrat skins. May 27, parcel of muskrat skins. June 1, box of undersized fish. June 17, box of fish, sold for $3.50.

Four prosecutions for using nets without a license took place. Offenders paid fine of $5 and costs each.

Six nets were seized and destroyed. About $150 has been collected for licenses, game dealers, cold storage, etc.

He does not approve of the change in the season for ducks. The Quebec Government changed their season from September 15th to September 1st, so that the law would be the same in both Provinces. Now the Ontario Government have made a change from September 1st to September 15th, but allow plover and snipe to be shot on September 1st. He thinks this is a very bad move. If ducks are not to be shot till September 15th, then close the season for plover and snipe, too, make them uniform. But in that district they would rather that ducks, plover and snipe, also woodcock, should open on September 1st. He is not in favour of a change in the close season for deer.

Quite recently he seized two large trunks of partridge. The orphans in Ottawa and Belleville have been living high, and he is now on the hunt for the owner, and thinks he will get him; 600 birds at $5 each will be a pill for him to swallow. He will get all that is coming to him, if it is the party he thinks, for this is not the first time he has shipped, bought and sold. He caught him before, and expects to again.

Overseer William Major, of Woodlawn reports that the past ten months have been very quiet, and the law was well observed in his district. There was no Sunday shooting. The fishing has not been very good during the summer season. Pike, suckers and bullheads are most plentiful, but pickerel and bass are scarce in those waters.

Ducks are very plentiful, also geese. Partridge are scarce. Muskrats are plentiful. No houses were cut open that he could see in his district. He has made no seizures the past year.

Overseer John McGuire, of Jones Falls, reports that he was not in his own district during the month of November, 1909, as, by order of the Department he was in charge of the Big Rideau Lake for the purpose of protecting the salmon and whitefish during the month, which is the close season for those two species of fish. He was furnished with a first-class man as assistant, and they took up their abode on an island for the whole of November, sheltered by a canvas tent 10 x 12 feet. They were furnished with two good row-boats, and the patrol motor boat "Mermaid" was also well provided with boats and every other thing necessary, and being possessed of a will and determination to do their duty, they put up a patrol of the lake, using the launch in the day time and the rowboats at night whenever the weather would permit, and he thinks they discouraged and frightened the old time poachers, about whom so much has been said in the past, for during the whole month no irregularities or violations of the law came under their notice. He thinks that the month of November was the first November in a generation without a seizure of nets and a conviction for an infraction of the law. He returned to Jones Falls on the 2nd of December, and took charge of his own district again. There was very little doing in December, except looking after the licensed fishermen. There is not much poaching in his district. He paid some visits to back lakes, but discovered no violations. On the 28th January he went to Temperance Lake in the Township of Young in Leeds County, to investigate a complaint to the effect that

a man was fishing there with hoop nets without a license, but found no nets in this lake, and the water was not deep enough to cover hoop nets. He did some driving with horse and cutter to different places in the interest of the game and fisheries. In February he found a man fishing without a license in Cranberry Lake. Being provided with a team of horses and an assistant, and the necessary tools, he went to said lake and seized five sets of nets, took them out of the water loaded them up and brought them to Jones Falls. Afterwards, when the owner made things right, and complied with the law, he gave him back his nets. Nothing more of interest occurred during February, excepting an occasional drive with horse and cutter to some of the back inland lakes where illegal fishing is most likely to be indulged in, but discovered nothing wrong in any of these places. There were no violations in sight. During the month of March, very little of interest occurred. He kept up an almost daily patrol with horse and cutter. In his district there is quite a number of inland lakes, and their outlets to the canal are nearly all well situated for illegal fishing in the winter season, as there are very few inhabitants around those back lakes, and it used to be the habit for the fish pirates to go in to those places and carry on illegal fishing unmolested during the whole of the winter. On his first patrol trip in the winter time to Hart Lake, he found two sets of hoop nets set for fishing, which he seized, and afterwards by order sold them and remitted the price to the Department. This winter he saw no signs of anything illegal in those places. During April the ice was bad, and very little could be done in the way of driving. Looking after the trappers was the chief part of his work during that month, and one thing he wishes to mention is, that these trappers are in the habit of digging into the bank with a spade until they find the hole starting under the water and leading to the muskrat house far up in the bank above the water level. When this hole is found by the trapper, he sets his net and puts it down in the passage, and often ten or twelve rats are caught in one of those passages from the rat's house to the open water in the lake. If this is not already against the law, he thinks it should be, and all overseers notified that this is the rats' home in the bank just as much as when built out in the marsh.

Having had the "Mermaid" put in good condition and fitted up in first-class order for the season's work, he started to patrol the waters of the Rideau Canal. Strating out from Jones Falls at 10 a.m. on May 10th, acting as Master himself, and with R. J. McGuire managing the engine, and assistant in general, they patrolled Whitefish and Cranberry lakes to Brewers Mills. They kept up a patrol on an average of four days in each week during May. It being the close season for bass, there was not much doing, and an every day patrol was unnecessary During the month of June, business in the fisheries began to be more lively. He commenced the month by patrolling the Rideau waters to Kingston, at all times keeping a close watch for anything that was contrary to law. While passing along on patrol, he never ceased looking after poachers. Next morning, after making some inquiries and interviewing some parties that he knew to be interested in the fisheries, to try and ascertain whether the fishery laws were being observed or not, they started on their return, patrolling all the different lakes from Kingston to Jones' Falls, making frequent calls along the way to gather all the information possible. During the whole of this month they kept up a constant patrol of the waters of the Rideau between Newboro and Kingston, except when too stormy to put out, occasionally running into Bedford Mills and many other backward places where illegal practices might be indulged in. After the 15th of the month the tourists commenced to come in in large numbers to enjoy themselves at their summer hotels, and to indulge in the splendid fishing that that part of the Rideau

waters has long been famous for. This season so far promises to be exceptionally good, and some fine catches have already been exhibited.

During the month of July, with exceptionally fine weather, the tourists continued to come in in large numbers until the hotels were all filled to their utmost capacity, then summer boarding houses and cottages were all filled, then large tents were erected and occupied by tourists. Those tents were in evidence on the shores and banks of the Rideau Canal chain of lakes from Kingston to Newboro, being the part of those waters patrolled by the "Mermaid" and managed by him this season. He acknowledges that he is not possessed of language adequate to describe the beautiful appearance of the Rideau covered with boats of all and every kind, filled with tourists of all ages and nationalities well pleased with every part of their surrounndings, but above all with the good fishing afforded by those waters under his supervision, which was better this season than ever before, and yielding a large increase of revenue. This is very gratifying to himself, as well as to all others concerned. The fisheries of the above mentioned district have been under his care for the last six years, and to find them improving, with the great amount of angling done every summer, is certainly very gratifying to him. The Americans now as a whole are well pleased with the Ontario Fishery Law. He has not met one man this season but was willing to take out an angler's license and pay the required fee of $2, which they think fair and just.

As the season wears on and the month of August comes in, the hotels and boarding houses are still crowded with tourists—mostly non-residents of Ontario. Some are leaving for home, and others coming in to fill the rooms just vacated. Almost every day during this month, the "Mermaid" may be seen on patrol on the Rideau waters somewhere between Newboro and Kingston. Towards the last of the month, the tourists begin to talk about home. The camps on the banks of the canal waters are disappearing, and the boarding houses are becoming vacated. The hotels still do a fair amount of business, but it is easy to see that the best of the season is over for them.

During the month of September, a new trouble for the overseer arises, viz., to educate the people who have been in the habit for years to turn out at daybreak on the morning of the first of September to have what they call the first shot at the ducks, this being in the past the first of the open season. It has now been changed to the 15th, which he is sure from experience is a very wise one, as it gives time for the young birds to more fully mature, and they are not so easy to capture by the wily sportsman. But to make this change in the open season to be properly understood by the people of this country has been no small part of the overseer's work, if he has thoroughly attended to it. The fact that the season for plover, quail, waders and snipe is still as before makes an excuse for the poacher to get out with his gun on the first of the month and shoot, and it is very difficult for the overseer always to know just the kind of birds he is hunting. He would suggest that the open season for the last mentioned birds be also changed to the 15th, as it would give the overseers a better chance to protect the ducks.

There are still some tourists stopping at the hotels in his district, and the fishing is reported good. Some fine specimens are still to be seen at the hotels in the evenings when the sportsmen come in from their day's sport. The weather during September was unusually fine, lots of work for the overseer, and good, fine weather to do his work in.

It was easy to be seen during October that the tourist season was coming to a close, which season has been the best in every way in his experience, both finan-

cially and otherwise. Although he has returned more money to the Department for non-resident angling permits than any previous season, it has come with a good grace. He has not met one American wishing to angle in the waters of his district but was willing and goodnatured about paying $2 for a permit. They think it fair and just, and that the fishery laws of Ontario are good and reasonable to non-residents. The fishing has been extremely good, and this accounts largely for his success this season. When the fishing is good, it is easy for the overseer to be a favorite with the angling tourists. On the 18th October on the Big Rideau Lake about eleven o'clock at night, he found a party of four men fishing for salmon with gill nets, which is contrary to law. He seized their nets and fish, and laid a complaint against them. On the 21st he assisted in the seizure of five sets of hoop nets in the River Styx, near Kingston Mills. The salmon spawn in October, and they come up in the shallow waters and are easily caught. The old time poachers are hard to watch, but this season the overseers have got a gait on, and a lot of poachers have been pinched by the J. P.'s, and others waiting their turn. The local J. P.'s are not severe enough; the maximum amount should be imposed.

Overseer J. H. Phillips, of Smiths Falls, reports that he left Smiths Falls on May 16th to go to Kingston to take charge of the steamer "Ella C." He left Kingston on May 17th, and kept up a constant patrol all summer until the 6th October, when he turned her over to Capt. Fleming to patrol the Bay of Quinte the remainder of the season.

The fishing in the Rideau, on the average, is somewhat better than in former years. The salmon fishing has improved considerably and has not been excelled for quite a number of years. The close season for salmon should be in October instead of November, in his opinion, as they run about the middle of October in the Rideau. He thinks the sale of salmon for the market should be stopped, as the guides for the Rideau Lakes fish and sell for the market from the time the ice goes until the tourists begin to come. The bass fishing was not extra during the first part of the season, but there were many good catches later on in the season.

The Rideau is improving every year as a summer resort, and the number of tourists who were there this summer exceeded the number of preceding years, every summer home and boarding house being crowded. Altogether there were about eighteen new cottages erected on the banks of the Rideau Lake.

The fishery laws and regulations were well observed. He had but three convictions, the first being a man using gill nets in Otter Creek. He had him fined $10.00 and costs. The next offence was a party shooting on a Sunday, and taking rats out of season. This conviction was on November 29th, 1909. On October 18th he seized one gill net in the Big Rideau.

He adds that he found the steamer "Ella C." to be a good boat for the patrol service of the Rideau, and he finds that it has the desired effect in stopping illegal fishing. Last winter, by the use of hoop nets, many tons of ling, a most destructive fish, were taken out of the Rideau. The work has been most favourably spoken of by those who visit and live on the lake. He would recommend that the work of cleaning the lake of ling be carried on until they are fairly well cleaned out.

The ducks are more plentiful this year than last. The partridge are also increasing in numbers, owing to the close season put on by the Department.

Overseer H. R. Purcell, of Colebrook, reports that the fishing for bass and pickerel in the several lakes in his division is said to be good. Most of the tourists

Upper Lock, Jones' Falls, Rideau Lakes.

On Lake Openicon, Rideau Lakes.

who came there appeared to have got their angling permits from some one on boats coming over to Canada. Some say that by getting their permits from these parties they have no trouble getting their guns and baggage over. A party was fined for fishing a jacklight in a little river.

There are a great number of saw, planing and shingle mills in his district, and with the exception of a couple they have elevators to carry off the sawdust, and there is very good care taken of the sawdust. The County of Addington is very much in need of a pond or two for the cultivation of bass and pickerel along the Bay of Quinte Railway, as there are several good places to locate them and good railway connection by Bay of Quinte and C. P. R. As his district is large, it requires a good deal of attention, both on the rivers and lakes, and in the woods.

The muskrats were not so plentiful last spring, which he attributes to low water in the river, swamps, and small streams. Several parties were fined for carrying guns where there were deer and some were allowed to go on suspended sentence.

Overseer J. C. Raphael, of Mallorytown, reports that fishing has been good in the St. Lawrence River this year and maskinonge have been very plentiful. The ducks are very numerous this fall, and they are not being chased with motor boats, as the hunters have found out they get better shooting not to run them. Partridge are very scarce in this section. He has found no illegal fishing.

Overseer George M. Slate, of Rockport, reports that this season has been one of the best both for fishing and hunting that has been experienced in his district for a number of years. The catch of maskinonge and black bass especially has been exceptionally large numerically and in size, the legal limit being easy to acquire. The one trouble he has had has been in keeping close watch so that the enthusiastic angler would not so far forget himself in bringing in a catch far in excess of the legal limit. He again makes the suggestion that the Government should re-issue licenses for the use of set lines for catching sturgeon. The feeling is so prevalent in his district that a largely signed petition was forwarded to the Minister with the hope that the Department would see their way clear to acquiesce in the request. (See his report of 1909.)

He is also of the opinion that if the Government would reduce the license fee for hunting to apply on the international waters only (same being Kingston and Prescott) it would mean considerable increase in the revenue from that source as there are many who would only hunt in his district, feeling they cannot afford to pay the present fee, but would take out a license if fee was commensurate with the amount of sport they might get in this particular district, not being financially placed to enjoy the sport in outlying districts of the Province.

Regarding illegal fishing in his immediate district it has been practically nil.

The amount of licenses issued by him for hunting, especially large game, has been encouraging, his entire issue being for the sportsmen from across the border. If the use of dogs had been allowed doubtless a goodly number of licenses would have been issued to parties residing in his district.

Overseer William Spence, of Athens, reports that the past season for fishing has been very successful, the game and fishery laws having been well observed. There were no cases of illegal fishing. There has been good fishing all summer, owing to the increase in all kinds of fish.

Black ducks were plentiful the first part of the season, but are scarce at the

present time. His opinion is that there should be a law that each person should have a limited number, the same as for fish, because some hunt to make a regular sale of them.

Since the protection has been given to partridge, these splendid game birds are quite numerous, which all are pleased to note. There is a slight increase in black squirrels since the law has been strictly observed. Muskrats were scarce. He thinks it would be advisable to license trappers. Mink are scarce.

Overseer Fred Stanzel, of Carleton Place, reports that he has heard of no violations of the game and fishery laws during the past year. Two very suspicious cases were brought which did not result in conviction, but warnings were given which had a good effect. He has spent much time patrolling the waters of his district this season, and is quite satisfied that the fish were well protected. Black bass are larger, and the quantity about normal.

Ducks have been more plentiful than they have been for years. Partridge are increasing, and he believes the prohibiting of the killing of them last year has been very satisfactory. Muskrats have increased.

Overseer James Stewart, of Lanark, reports that the past year was not marked by any special features. There is no game fish there except black bass, of which there was a fair catch.

About 110 deer were taken and about 2,500 muskrats. The game laws were well observed. There were several small infractions which did not amount to anything.

Overseer R. B. Storey, of Escott, reports that the game and fishery regulations have been well observed in his district, and he believes there has been quite an improvement over past years. There were no reports of violations of the game laws, although he had one report from the Lord's Day Alliance of Sunday fishing, but no names were given, and as he had never seen any such violation, it was impossible for him to do anything. The fishing was not very good. The fish caught were pike, suckers, bullheads, perch and sunfish.

Ducks were quite plentiful the first part of the open season, but when shooting commenced they seemed to leave. It has been a poor year for muskrats, and he thinks that a shorter season would be of great benefit. Partridge seem to be quite plentiful, although they were scarce last year.

This is the second year for a game and fishery overseer in that district, and he finds that the laws are much better observed than in former years.

Overseer James Townsend, of Long Point, reports that the past season has been a very successful one. More tourists visited the waters than any previous summer, and all were well pleased with their fishing ground. Some very fine specimens of bass were landed, some weighing as high as 6¾ lbs. The salmon fishing was also good. He would advise keeping down the coarse fish, and something should be done to rid Singleton Lake and Carding Mill Lake of ling.

Re game. He thinks it would be better that the close season for snipe and plover be the same as that for ducks.

On the whole the law has been well observed, and the season has been a profitable one.

Overseer H. E. Wartman, of Portsmouth, reports that the fishing in his district has been very good this year, with the exception of bass, they were small in size and

not so plentiful as last year. Carp and dogfish in creeks and mud bottom bays are on the increase. He thinks in those kinds of waters hoop nets would be advisable to keep down the rough fish.

The law for bass in his district, as far as he can learn, was well observed.

Wild ducks this year are on the increase, especially black ducks, plover also, but the law this year allowing plover to be shot two weeks before ducks makes quite a confusion. Some hunters shooting plover could hardly resist shooting ducks if they got a chance and it is hard to apprehend them, as of course they are only shooting plover.

If the law for all kinds of feathered game commenced on the same day it would stop some illegal duck shooting.

Judging by the muskrat houses, they are not so numerous as last year; the houses are small and not very plentiful, which might only denote an open winter, seeing they have a strong instinct in that direction.

Overseer J. R. Wight, of Newboro, reports that the law has been well observed in the district over which he had charge. The amount of business done is still on the increase. The licenses for rod, and also for guides, is quite popular with everyone interested. He would strongly recommend the limit of a day's catch of bass reduced from eight to five, also their lakes re-stocked with small-mouthed bass fry. The usual number of hoop net licenses have been granted to proper parties to catch out the coarse fish, which are a menace to the spawn and young of game fish.

The lakes immediately west of Newboro are getting very popular as salmon trout resorts. Specimens weighing 25 lbs. were landed during the summer. The close season for salmon in that section is wrong, they being caught during the spawning season in October. This should be stopped, also the sale of the fish, which encourages illegal netting. Most tourists would rather catch one salmon than a hundred bass, and bass are not allowed to be sold.

Partridges are very numerous in most sections, while wild duck that breed in this section are not so numerous.

Many trappers object to the open season for mink starting on December 1st and ending April 30th. They say it should start and end a month earlier. Farmers complain of the close season on black squirrels, as they are very destructive on corn and fruit. The unprecedented high price of raw furs has been a great boon to trappers, but has led a few to risk the experiment of putting out poison, which kills more game than all the other agencies combined—often the fur-bearing animals.

His supply of deer licenses was sold before the season opened. Most of them were for hunters in the immediate vicinity, there being a number of deer within 8 miles of Newboro. Limiting the number of deer to one has had a tendency to encourage sportsmen going after them.

Overseer F. L. Wormnoorth, of Arden, reports a very good year. He had no complaints of illegal fishing. There were more tourists than last year, the majority of them being residents of the Province. The fishing was better than last season. The bass in some of the lakes are getting scarce, but the lakes are being replenished, and this will be a great help to the lake near the village. The proprietor of one of the summer houses in the village says he had an exceptionally good year, but that if there were more game fish in the lakes in that vicinity it would be better. A number from Toronto are building a large club house on the shore of Cross Lake, which is about six miles from Arden.

There was only one violation of the game laws re killing deer in close season. The party was convicted and fined $50 and costs. He sold thirty-three deer hunting licenses. There were some complaints about having to pay the $2 license fee, but not to any great extent. The partridge shooting is good, also duck hunting.

He did not have any trouble this year with mill rubbish as in former years.

Overseer D. E. Younghusband, of South March, reports that angling was not up to much this year. No permits were issued. The principal fish there are suckers, perch, sunfish, bullheads, pickerel and pike.

The Game and Fishery Laws were well observed, only one seizure of traps set for muskrat during close season. Muskrats are quite plentiful. There were many trappers last spring owing to the high price of furs. No deer of any account in this district. Duck were very numerous there and a good bag made. Partridge are more plentiful than in the last five years, but not many are shot.

He would suggest that open season for all water fowl and shore birds or waders commence on the same day.

PETERBOROUGH, NORTHUMBERLAND, VICTORIA, AND OTHER INLAND COUNTIES.

Overseer John Beatty, of Old Fort, Midland, reports that the game and fisheries laws were better observed during the past year than in the three previous years. The fishing, such as black bass and pickerel, has been good this season. The pike and maskinonge were quite plentiful. The trout fishing was not as good as last year.

Re game. Partridge have increased very fast, and the sportsmen are having great luck since the season came in. Wild ducks are very plentiful, a considerable number having been shot during the season so far. The duck hunters say there are more black mallard grey ducks than there have been for ten years, on account of there being plenty of wild rice to feed on. Quite a number of muskrats were caught last spring, as the prices were high. There does not seem to be one for every twenty-five houses there were last fall. The majority of trappers would like to see a close season for a couple of years.

Overseer J. R. Boate, of Fowlers Corners, reports that the fishing this season has been very good, bass and maskinonge being very plentiful. The catch is mostly by local fishermen.

The game and fishery laws have been well observed, no violations having come to his notice. He would respectfully suggest that the following amendments be added to the Game and Fisheries Act: That winter fishing through the ice or otherwise be not allowed: that mink be protected from the first of May till the first of January; and that muskrat be taken only in the month of April in each year.

Fur-bearing animals are getting scarce in that district, and not so many were taken as in previous years. Partridge are more plentiful than in the past, thanks to their protection, but he thinks they should be still protected until 1912. Ducks have been very plentiful this season, and good shooting was the order of the day.

Overseer J. H. Boyd, of Merrickville, reports that the fish have greatly increased, especially mudpouts, pickerel, pike and bass. The people are highly delighted to think the fish are so numerous, and he expects quite a few tourists next year. There have been fourteen licenses for dip nets issued for coarse fish. He has confiscated nine nets, and fined three men for illegal fishing. He thinks the people

have done away with spearing after night with lights, as he has not seen any this fall.

Re Game. Ducks have greatly increased in that vicinity in the last few years. A great many have been shot this fall. Deer are also rapidly increasing, but a great many of them are frightened by the dogs. Partridge has increased wonderfully in the last two years. There are a great many muskrats in his district, in fact it is one of the best muskrat districts in the older portion of Ontario, and he would like to see them protected by license. He confiscated six muskrat traps. Mink has not increased any in the last couple of years. He fined two men for shooting out of a yacht, and three for Sunday shooting. On the whole the law has been very well observed, and he thinks the game and fish have increased considerably since last year under protection.

Overseer A. O. Boynton, of Kirkfield, reports that bass have not been so plentiful this season as in former years. Those who have been fishing think that it is owing to the rapid increase of carp—that they destroy the spawn and small fish. The carp are very numerous on the drowned land west of the Lift Locks. Lunge fishing was fairly good east between the lock and Balsam Lake. No fishing permits were sold, as tourists do not remain on these waters, but pass on to the different lakes. There are none here who make a business of fishing, and the local sports like to see the law enforced; and no violations of the Act have occurred, although there are quite a number who take all the pleasure out of this sport that the law allows.

The protection steamer "Naiad," with Capt. Carson and crew, passed through the canal quite frequently this summer, and although they are good at enforcing the law, they have never found any violations in that section.

Not nearly so many muskrats have been taken as last year, although quite a number are to be seen along the water. Ducks were not very plentiful: the hunters think the season too late. Partridge, after their term of protection, are quite plentiful, and the young hunters are taking the good of the sport. A stray deer is occasionally seen in that section, but a great many who have always gone deer hunting have given it up this year, thinking the allowance of one deer for a license too fine. Quite a number think it would be better if the allowance were two, and the use of hounds stopped.

Overseer A. Bradshaw, of Lindsay, reports that it is pleasing to him to state that he has received valuable assistance from a great many people who wish to see the Game and Fisheries Act rigorously enforced and lawbreakers properly punished.

Maskinonge were not as plentiful last season in Sturgeon Lake, while in Scugog Lake they are said to have been more so. Bass were caught during the season in large numbers in their usual haunts. The new locks and dam at Lindsay are finished, and it is a great convenience to those passing from one lake to the other. There are three sets of lock gates, so there is likely to be a big traffic in the spring. When the fish come up to spawn in spring, they will be enabled to ascend when lockages are being made. The new dam will be a great improvement in keeping the water up to a proper height, and will assist in preserving the fish in Scugog Lake during the winter months from the effects of severe frost, which in other years has injured them badly.

There are two trout clubs in Lindsay, composed of some of the best citizens of the town, and they go out to places where they have fishing rights. Some of these gentlemen have asked him to say in his report that they would like to get the law

changed so that brook trout would be caught from the 15th April to the 15th August, as in their opinion the change would be better. There is no trout in his division, and he only reports what he was asked to do.

Frogs should be protected in all the waters of the Trent Valley Canal for two years, and if not in Trent waters, at least in the County of Victoria.

Partridge are found in their usual haunts as plentiful as in olden times; that is where conditions are the same as they used to be, and this is another proof that nature holds the balance when left to right herself. The wise forethought of those who restored those magnificent game birds to the people of this Province by the timely protection given for the past two seasons is fully appreciated by all true sportsmen.

The change in duck shooting from the first to the 15th September was not satisfactory to local shooters in that section, as shooting of snipe and plover was allowed on the first of September, and shooting at these birds often disturbed the ducks while on their feeding grounds. Ducks were plentiful, and sportsmen were well satisfied with their increase in numbers.

A good catch of muskrats was made last spring, although the season was unusually short, only lasting from seven to eight days. Some local trappers secured over $100 worth in that time, and this shows the immense value of these little animals when properly protected.

Mink, no doubt, with proper protection, will again become numerous, but it will take a few seasons to do it. The mink skins were much valued, and what were taken netted good prices, $7 being about the price received by trappers for a mink skin.

The law was fairly well observed during the past season. Only one breach came to his knowledge, and this was a breach of section 20 of the Game and Fisheries Act. He had the offender before F. D. Moore, K.C., who imposed a fine. A vigilant watch is at all times necessary, and this is kept up.

He suggests a few changes in the Game and Fisheries Act, which in his opinion are for the better protection of the game and fish.

That all winter fishing be prohibited, and that the open season for trolling for maskinonge be from June 15th to November 1st, and that the close season should begin on April 1st, as the run of maskinonge was over last spring before the close season for them began. Bass to receive the same protection as the lunge, so as to avoid trouble.

That frogs be protected for two years in all the waters of the Trent Valley Canal, and if this cannot be done, protect them for two years in Victoria County.

That mink should be allowed to be caught from November 1st, and that they cannot be hunted with dogs in winter, this being the most destructive manner in which mink are killed. Trapping or shooting only should be allowed in killing them.

That muskrats should only be trapped in spring, and all fall and winter trapping prohibited in the Trent Valley Canal, and if this cannot be done, then in Victoria County.

That no artificial light be allowed in hunting or killing game animal or bird protected by the Game and Fisheries Act in Victoria County.

Overseer Christopher Burtcheall, of Coboconk, reports that the fishing was very good this season, the bass being the best in the first part of the season, and towards the end the maskinonge fishing was unusually good. He thinks the tourists were more numerous this summer, as he sold more angling permits than

last season. He says there is little or no illegal fishing done in the spring now and he had only one case of illegal fishing.

Re game. There are no mink, and not very many muskrats in his district. Otter are scarce also. There seems to be one family of otters around, and if they can be properly protected for a few years, they might increase in numbers. All other game are scarce. Deer are not very plentiful, and as far as ducks are concerned, they seem to be gone entirely just at present. He does not see many partridges in his travels, and thinks the partridge season should close at the opening of the deer season.

Overseer C. H. Cassan, of Campbellford, reports that the fishing, especially the lunge fishing, was good the first part of the season, and there were some large fish caught. During August it was not quite so good. The bass fishing in the rapids was good, but they are not very large. He thinks the guide licenses are a great help to protect the fish as well as the ducks. He would recommend that a hatchery for bass be put in, as the Americans would rather catch bass than any other fish, and he thinks that if there were lots of good bass fishing the revenue from non-residents would be much better than it has been. There have been more Americans in his district this year than last. The fishing on Crow River has been better this year than for a number of years, since a large summer boarding house has been started. There are seven good summer hotels on the Trent River from Campbellford to Trent Bridge, and good accommodation.

The bullheads and mudcats are becoming very plentiful. He would recommend that pickerel, bass and lunge come in all at the same time, and a strict law to stop all kinds of fishing in close season, as when parties go fishing for pickerel they take anything they can catch and do not throw them back, and it is impossible to catch them. He would recommend a close season for frogs, as it would stop a lot of spearing.

Ducks have been more plentiful than last year, and the laws have been pretty well observed, although he has quite a lot of trouble with the Indians, as there are four contracts going on in his district and they keep coming and going, and every time a new gang comes there is trouble. He thinks that the close season for partridge has been a good thing, as there seems to be quite a number of these birds this year.

Overseer Thos. H. Cheer, of Brighton, reports that the lake fishing on the whole has not been up to the average of former years, heavy storms destroying many nets, and the catch has been light generally.

As to game fish, such as black bass and maskinonge, there are no gravel beds or other spawning places there, the bottom being mostly mud, and the game fish scarce. Pike, perch and other rough fish are fairly plentiful.

Speckled trout have been fished so persistently in the streams that they are nearly extinct, and he would recommend that a close season of from three to five years be placed on the streams of that locality.

Game. He thinks that deer licenses should be issued from the 15th of November to the first day of December, both days inclusive, and that one deer per man be sufficient, and no deer under one year old be killed. Partridge is on the increase, and he would recommend that a further close season of two years be placed on them. Black and gray squirrel are very scarce, and he would suggest a close season of from three to five years.

Wild geese are very scarce. and only come in the spring, and not many are killed. Ducks of all kinds are gradually becoming scarcer, owing to the fact that the duck hunters are allowed to set decoys 200 yards from the shore, which necessitates punting on them from that distance.

There seems to be a wide difference in opinion as to what constitutes a legal hunting boat, some claiming that a monitor or sink box is an improved hunting boat. He does not agree in this opinion, claiming it to be illegal and suggests that an open skiff or canoe be the proper hunting boat.

Snipe and plover should be from 15th September to 15th December, which will remove the excuse to be on the duck grounds on the 1st of September or before the ducking season opens.

In his opinion the open season for muskrats should be from the first of March until the last day of April. which will stop the early and illegally caught furs from being offered for sale before March, and give no excuse for destroying the houses and burrows which the muskrats inhabit, as it is impossible for any inspector to be at all points at once.

He thinks the open season for mink should be from 15th November until the first day of February, after which time the animals rapidly go off prime. and it is then their running season also.

Beaver, otter and the other large fur-bearing animals are totally extinct in that district.

Overseer Gordon Clark, of Westport, reports that he is unable to make a very full yearly report, having only been appointed overseer for the Township of North Crosby in February last.

In regard to fish. The pike have been very plentiful, and the close seasons have been very well observed. He only had to fine one man for catching pickerel. and another for shooting a loon. The bass and pickerel were very scarce in the first part of the season. but better later on, the reason being that the lakes are full of ling. There have been quite a number of tourists there this summer. He has sold 49 permits. and quite a few came bringing their permits with them. He has found them all very gentlemanly in every respect.

Ducks have been very plentiful. Mink are very scarce, and he thinks they should have been protected years ago. Partridge are very plentiful. The deer are more numerous than usual around there. It is not a very good country for deer. as it is too well settled. It was no trouble to sell deer licenses, and all seem satisfied with one deer.

Overseer William Clarkson. of Lakehurst, reports that the catch of bass and maskinonge was up to the average in his division. except in Sandy Lake. He would recommend that Sandy Lake be restocked with parent bass.

The tourist trade is increasing every year.

He sold one hundred and two permits this year. There was also a large number who secured their permits on their way there.

He also sold twenty guides' licenses.

The Fisheries Laws and Regulations were well observed: only two violations, both of catching fish in close season. The parties were both fined.

Mill owners gave no trouble during the season.

Duck. partridge and muskrats are plentiful. Apparently the deer are very scarce. just about one deer for every four hunters last season.

Overseer Alex. Clunis, of Claude. reports that he has gone over his territory

more often this season and finds he has fewer complaints coming in, and the people get more accustomed to keeping the law. This year he had no complaints about the close season, and there was a splendid catch of speckled trout in season. So it looks as if the law was well kept. Last year he spoke of the disappearance of all the parent bass which were put in the River Credit, as he could not get any account of any being caught, but this year they have been catching large numbers down at Meadowville, so that would go to uphold the idea that the bass all went down below the mill dams and are not able to get up again, and that would show the necessity of putting on fish ladders.

Game—Partridge are quite plentiful since the law shortened the open season. Black squirrels are not so plentiful this season. He thinks they are there one season and perhaps north another season, according to the severity of the winter and the amount of feed.

Fur-bearing Animals.—Now to the taking of muskrats, he thinks they should be protected for a couple of seasons in his district, or not a rat will be seen in a few more years; also mink, they are simply slaughtering them; there is a shooter for every animal.

If no change in the law for taking these animals is made, then he thinks there should be a good, stiff license to carry firearms, so as to stop every boy in the district from shooting everything on sight.

Overseer W. E. Collins, of Strathroy, reports that there were not many fish caught this season, owing to the high water coming too soon, but the anglers had lots of sport catching pike and pickerel. There are lots of carp in the waters in his district.

There is one sawmill in that locality, but they do not put sawdust in the stream now.

He has had no fines imposed. No violations of the Act came to his notice.

There are lots of black squirrels, but not many quail, and there are a few partridge left.

Overseer Arthur Corsant, of Masonville, reports that the fishing has not been so good this year as last, the spring fishing being very poor. There was a decrease in the catch of suckers and mullets; black bass and pike were more plentiful. There were very few speckled trout in the streams in his district.

The only game in his division are rabbits, black squirrels and muskrats, and a very few partridge.

The close season has been very well observed, no violations having been reported to him.

Overseer Oscar Crooker, of Kearney, reports that fish are not numerous in the rivers and lakes in his division. Bass and pickerel are not found at all, although they are plentiful in the lakes farther down the Magnetawan. He would suggest the construction of a fishway at Brooks' Falls, a fall of twenty feet or more between Kearney and Katrine. He visited several lakes during the season on complaints of violations of the law, but upon investigation found no one willing to make definite charges. He is of the opinion that the law is fairly well observed. He sold fifteen permits to non-residents, but a good many others came there to fish who had procured permits from officials at the border.

The regulations regarding mill refuse have been well observed.

Partridge are more plentiful than for three or four years. Beaver are plentiful, also otter and mink, but deer not so numerous as a few years ago. Muskrats

are scarce. Otter and mink are certainly game destroyers, the otter destroying many fish, also beaver. The mink destroy young ducks before they are able to fly. Wolves are numerous away from the settlements. In his journeys through the woods he found some deer that had apparently been killed by them.

Overseer Joseph Diboll, of Outlook P.O., St. Joseph Island, reports that the law has been well observed in his district since his appointment. There have been fewer American poachers than there used to be, and a great increase in the number of tourists. He has endeavored to do his duty as far as possible, has delivered quite a number of summonses for Mr. Eddy, and other duties he was instructed to do. Angling was better than it was ever known to be before, and the tourists were greatly taken up with the fishing grounds.

Fur-bearing animals, also moose and deer, are increasing very rapidly. The hunting is the best ever known on St. Joe Island. Since the hounds were not allowed to run at large, the deer have not been run off, which is a reason for this increase. He says, in conclusion, that St. Joe Island will be a great place for game and fish if protection is continued, but a launch is much needed, and if he had one he could do good service.

Overseer Edward Fleming, of Hastings, reports that the game and fishery laws have been well observed in that part of the River Trent. Very few fish came up or down the river through Hastings this summer. He thinks the reason was that they were working on the canal and blasting, and the noise would scare them away.

There has been good shooting on the river this fall, ducks being very plentiful, especially black ducks.

Overseer George Fox, sr., of Dalrymple, reports that black bass was plentiful, in the season, pickerel scarce, maskinonge very scarce.

Ducks were plentiful, partridges on the increase, also muskrat, mink very scarce, and deer on the increase.

He thinks the law has been well observed so far.

Overseer Chas. E. Halward, of Cannington, reports that the Game and Fishery Laws have been very well observed there during the past season. There is very little fishing there as yet, but it will probably be better later on, as the river has not been stocked long yet.

He has noticed a marked increase in the partridge since their protection, and thinks it would be as well to give them a little more yet. Hares are plentiful, and there are also a few ducks. Game of all kinds seem to be more plentiful this year than usual. There are still a few mink and muskrat there, and in regard to the mink he would like to suggest that the season be from Nov. 1st to about the middle of March, as our prettiest and best furred mink are caught in November, while the spring mink are faded out by the hot sun, making them far inferior in value; and besides, as March and April are their mating season, they are easily caught then. He has had no occasion to prosecute any one. He heard of some parties shooting ducks early and warned them, but he caught no one in the act.

Overseer F. H. Heneilly, of Warkworth, reports that he is satisfied from enquiries, and also from observation that there have been more fish caught in his district than the year previous. The abolishing of the use of nets in the Trent River is, in his estimation the principal cause of the increase.

All the fish caught in that district are used for home consumption.

MASCALONGE

(*Lucius masquinongy*)

He does not know of any abuses.

As will be seen from his monthly reports, he has endeavored to have the close seasons observed, and he finds that the way to have this done is to keep a constant watch on the different parts of his district.

No violations of the Law came to his notice, nor was he informed of any. He discovered three sets of hoop nets at Percy Boom the past season, which he confiscated, but did not find out who owned them so that he could take action. Two of these nets were sent to Capt. Hunter, and the other was burned.

The different mills have complied with the provisions of the Act.

There are no obstructions in the Trent of an artificial nature. Ranney Falls, just below Campbellford, is a natural barrier.

Overseer William Gainforth, of Haliburton, reports that the fishery laws have been well kept during the past year, and he has no illegal acts to report. Fish appear to be on the increase. There is not much fishing done except by settlers and a few small parties trolling. The fish commenced to run early this year.

Partridge are more plentiful than last year, although there has been considerable illegal shooting by the Italians in the camps, and he finds it impossible to take them in the act, or to get sufficient evidence to convict. With this exception the game laws are well kept.

He has already reported to the Department certain parties for allowing the sawdust from their mills to escape into the lake, and has cautioned them several times but without much effect.

Overseer James Gillespie, of Berkeley, reports that his duties regarding fisheries are more particularly to look after small streams and lakes in his district, and prevent, if possible, the netting of speckled trout, and to see that the law is being observed in other respects. The overseers are of the opinon that they should be in a position to promise some reward for evidence that would lead to a conviction. There is a chain of lakes south of that place, and it is impossible for one man to watch both ends if he has reason to suspect illegal fishing, and thinks that at such time he should have assistance. There are several trout streams around the village of Chatsworth, and complaints were made that some illegal fishing was done last season. He made two official visits to Chatsworth and vicinity during the season, besides being in the village on other occasions; had a warning notice inserted in the local paper, and the regulations posted up in the vicinity, also told parties who appeared interested in preserving the fish to let him know if his presence was required, and he would go at any time. So far he has had no complaint from that quarter this season.

No angling permits were sold by him, and none were asked for. He is not aware of any fishway in his district, and has not heard of the pollution of any streams by sawdust or mill rubbish.

Re Game. Beaver are getting more plentiful, and in more than one instance have become a nuisance to farmers by backing the water and flooding the land. In November last he secured three beaver skins in the possession of a party at Markdale. Having received information that led him to believe the party had them in possession, he procured a search warrant, and with the assistance of a constable got the skins with very little trouble. He delivered them over to the nearest justice of the peace, the party was duly fined, and the fine and skins were forwarded to the Department. In other respects he believes the law as regards game has been fairly well observed, no other violations having come to his notice.

Several trappers complain of the close season for mink, saying that November is the best month for trapping, and that the fur is more valuable in that month. In the spring months, the fur, more particularly that of the female, is not so valuable.

As a few deer are reported as being seen in the district, many sportsmen think that the killing of them should be prohibited for a couple of years.

As usual, the notices from the Department were distributed through the district and posted up in order that people should know the law.

Overseer John Green, of Marmora, reports that the water was much lower this spring than for some time. Crow Lake is about two miles from Marmora Dam, and it is about three miles from Marmora to Callahan's Rapids. He thinks it would be a good thing to have a fishway in these two places. The one at Marmora Dam would be only a short one, and the one at Callahan's would be quite long. They have had very good bass fishing this season, but their lunge fishing has not been what their guests expected to find. They have some Americans from Buffalo, Rochester and New York who are sportsmen—they would not take an undersized fish out of the water. The same applies to our Canadians. There was an enormous amount of fish caught in Crow Lake. He thinks it should be stocked with lunge and bass. They have in Crow Lake such fish as bass, lunge, suckers, perch, sun fish, mudcats, eels. He believes if the Department would allow nets for coarse fish only it would be a good thing; then these fish could not eat up the spawn of the bass and lunge. The only way he sees to do this is to have the overseer in each place supplied with Government locks, and put one on each net. He would unlock them and could see that all game fish were returned to the water unhurt. It would lessen the coarse fish and leave the eggs of the game fish more plentiful. The best catch he has seen was that of Mr. H. A. Soder, of Rochester. He caught three lunge and eight bass in one day, and might say he believes that there are non-residents who have only a short time to fish in small lakes; they secure board at some farm house, and do not take out a license. He caught two at Deer Lake this year, and one at Allen's Mill. The law was fairly well observed. He fined one man for shooting fish, and one for putting sawdust in the river. He has noticed that there were quite a number of partridge and black squirrels this year.

Overseer R. H. Gunter, of McRae, reports that black bass are very numerous in Otter Lake, also trout in Big Weslamacoon Lake. Game seems plentiful, there being plenty of partridge and deer, some beaver and otter; muskrats quite plentiful, and, to the best of his knowledge, there has been only one deer killed in his division. Game have been well protected.

Overseer J. H. Hess, of Hastings, reports regarding his territory from Rice Lake to Trent Bridge that the game and fishery laws have been well observed, and that the fishing in that locality has been good, and the quality of maskinonge far superior to that of past years. Bass fishing has also been good, and the bass of a good quality. The fishing just at Hastings has not been up to the standard, the reason, he thinks, being on account of the Government works in progress, and so much blasting and dredging being done.

The law regarding game has been well observed, as far as he can learn. Partridge are more numerous than they were, and black squirrels are very plentiful this fall. He would advise the further protection of partridge.

Moose Hunting in Temagami.

Keewaydin Camp—Devil's Island, Lake Temagami.

Overseer George Hood, Sr., of Scugog, reports that during the past year there were no violations of the fishery or game laws to his knowledge in his division.

In regard to fishing, the conditions are much better than last year. On the west side of Scugog there have been a fine lot of maskinonge taken out this season. Forty lunge went through one boathouse this season, and 300 bass at Port Perry. He sold two licenses. The bass is very plentiful. He has seen some fine bass taken out of Scugog Lake this season, and if the lake is kept up to high water mark, and the fish carefully watched, they will have the finest fishing grounds in Ontario.

Ducks are very plentiful. The only thing the hunters complain of is the snipe shooting. They claim the open season for snipe should start the 15th September, or ducks should start the 1st September. Partridge is very scarce around there. Muskrats are not so plentiful. He thinks all trappers should have licenses, and that would help an overseer very much. He is doing all he can to help preserve the game.

Overseer Jas. Howell, of Bancroft, reports that he has visited the different lakes in his district several times this season, but has had to make several extra trips to Baptiste Lake to investigate some reports of unlawful fishing, but so far as he could find out the law has been fairly well observed.

He would suggest that all the lakes in his district containing salmon or grey trout be closed the 1st of October instead of the 1st of November, as he finds that that sort of fish do their spawning in October. There are no fishways in his district.

As far as he can find out the close season for game has been well observed. Partridge are very numerous this year.

No angling permits were sold, and none were called for.

The posters from the Department were received, and have been posted up in the three different townships of his district, so that most people knew the law.

Overseer C. Jickling, of St. Paul's Station, reports that the bass fishing has been fairly good in the small streams, and speckled trout are also fairly plentiful in the spring streams. A good deal of trout fishing was done on Sundays, but he got after a couple of parties last spring, and has not heard any more about it since, though they have made some ugly threats.

Partridge seem very scarce. He saw quite a number of woodcock in some of the swamps, and he thinks they are rather on the increase. Black and grey squirrels are very scarce. He thinks it would be a good idea to have notices put up to prohibit shooting all kinds of squirrels for one year in localities where they are so scarce. The muskrat is almost exterminated in some parts of his district; along some of the streams and marshes where a few years ago they were very numerous they are nearly all cleaned out, he supposes, on account of the advance in price. There has been a lot of shooting done along the streams on moonlight nights, mostly by boys, and it seems almost impossible to stop it. A party has promised to give him the names of several of the boys who have been doing it, and he says he will notify them, and then if he catches them he will follow them more closely. Mink seem very scarce in that district. He does not see why the coon are not protected as well as other furbearing animals. He also thinks the skunk should be protected, as he is one of the most valuable insect feeders and rodent hunters, and is the farmer's friend in general.

He had several parties fined for the catching of rats out of season by digging them out. It seemed to have the desired effect, and keeps others from doing it. He has been talking to a number of fur buyers, and gave each one a copy of the game laws. He proposes that they buy no furs caught out of season, and they all quite agreed about it, as they think they would get a better class of furs by so doing. The cotton-tail hare seems very plentiful in some parts of that district.

Overseer W. H. Johnson, of Harwood, reports that fishing has been excellent in Rice Lake this season. There were good catches, and a great number of large ones from 15 to 23 lbs. Black bass fishing was very good in his district, and a large number were caught. There were not as many tourists this year as in former years. The water was not quite so high as in 1909, and in the spawning season the water fell very fast, and in consequence a lot of spawn and little fish perished. It is his opinion that the fish in Rice Lake are increasing in numbers.

The fishery laws have been fairly well observed. One instance of illegal fishing came to his notice. He gave chase to a party fishing, for about three miles, and would have succeeded in capturing them but for a gasoline launch running up and taking them on. However, he telephoned to Capt. Hunter, and Capt. Carson of the patrol boat "Naiad," to come to his assistance, and was told by Capt. Carson that he had found out who the parties were, and would attend to them.

Muskrats are not as numerous as in former years. He would suggest that trapping be stopped the 15th or 20th April, as muskrats are being trapped too closely, and it would be a great help in increasing the numbers in future. It would also be a protection to fish in spawning season.

Ducks are quite plentiful. Partridge and black squirrels are increasing, he having seen more this year than for a number of years.

He has had a great deal of trouble keeping blinds cut down from the rice beds, but could not find who the parties were using them. He has also heard shooting on Sundays, and has made enquiries concerning same, but no one was able to give him any information.

Overseer John Jones, of Fenelon Falls, reports that the law regarding fishing has been strictly observed in the waters in his division, and there has been no illegal fishing at all. The bass and maskinonge appear plentiful, and some fine specimens were caught. This season they had the usual number of tourists, who all report the fishing good. The close season for frogs is having the desired effect, they being more numerous this season than they have been for several years past.

He would suggest that the close season for bass and maskinonge should commence on April 1st instead of the 15th, as the fish go up the creeks and spawn some seasons before the close season starts. The lunge and bass were nearly through spawning in Sturgeon Lake on the 15th April, 1909. He thinks the close season for trout in the waters north of there should be from October 15th to November 15th, instead of from November 1st to December 1st, as he finds the trout are spawning almost every season before October 20th.

In Cameron Lake and Burnt River, and the waters immediately adjoining, there is a species of fresh water herring that run in October and November, and that is the only time in the season they are seen or can be caught.

He finds that the carp come into these waters from Lake Simcoe, up the canal by way of the lift lock at Kirkfield, and that there are quite a few in Balsam Lake already. They are very destructive to the other fish, and there should be some way of preventing them getting into these waters, if it could be done.

He is not at all in sympathy with the guides for fishermen. The system in his experience is a failure in every way. A few take out a guide's license, and they simply hold up the tourists for big pay, and do not give them good service, while there are other men just as good guides, and better, but cannot afford to pay $2 for guiding for a couple of days. If the license was only $1, the tourists would get better service, as he found quite a bit of dissatisfaction with tourists about guides this season, simply because not enough of them took guide's licenses. He has never yet met one guide that was a benefit in assisting in the enforcement of the game laws.

He states that the steamer "Naiad" has visited these waters regularly with Capt. Carson and crew, and has done a great deal in helping to enforce the Game and Fishery Act. The "Naiad" arrived there in September with one of the officials of the Brantford fish ponds with a fine stock of small-mouthed black bass, which were in good condition. The number he would judge to be from eight to ten thousand, and great care was taken to deposit them in a proper place in Cameron Lake.

One more suggestion he would like to make is, that in place of bass having to be ten inches in length, as the law calls for, those fishing should be allowed to take their number, no matter what size. He has found out that a great many people throw the small bass back into the water, and a great many died in this way this season. He has seen quite a few small bass dead, and by making enquiries he found that that was the cause. The people all want the large ones.

Fur-bearing animals, such as mink and muskrat, are decreasing in that district, owing to the water being low in the fall of 1909 and rising through the winter, thus compelling the rats to retire, and a great number were frozen as a result of this. Ducks appear to be plentiful, and the law is strictly observed. Partridge are more plentiful this season than they have been for several seasons. Deer in the Haliburton district are not so numerous, and he has heard it said that a great deal of hunting is done out of season. The reducing of the number to one deer should have the desired effect, and is a good move. Moose are more plentiful than in years previous. In Haliburton district several have been seen in the settlement, and one came into Minden village in October. Wolves are on the increase, and are responsible for the decrease in deer around Clear and Black Lakes north of Haliburton. He thinks muskrats should not be killed for at least one year.

Overseer A. J. Kent, of Bewdley, reports that the close season has been very well observed in his division, although he is convinced that a few fish were taken in close season out of Rice Lake. He is satisfied that if there were 25 overseers on that lake, a few fish would still be killed, as it seems impossible to stop the illegal fishing entirely. However, he is pleased to say that the entire lake was fairly well protected last spring during the spawning season. But the Otonabee River is the sore spot. Good men should patrol that river, not only in the spring, but the entire year.

The fishing this summer was better than the previous one. Some very large fish were caught at the head of this lake—in fact no small ones. The run was from 9 to 24 pounds.

All the overseers on Rice Lake should work together harmoniously. That is the only way to give good protection to the fish, and if there is any illegal fishing going on in one division, and comes to the notice of an overseer from another

division, he should immediately acquaint the overseer where such fishing is being done, and give him as much aid as he possibly can without neglecting his own division.

Re Game. Muskrats were plentiful. He would recommend that each trapper pay a license of $2, and on the 1st of May state the number of muskrats that were caught by each license holder, and the number forwarded to the Department by the overseer of the division where said muskrats were trapped.

Ducks were very plentiful. The extra two weeks of close season was just the thing, but plover and snipe should have the same season as ducks. The duck hunters around Rice Lake are honorable men, no shooting done that he knows of until the season opened.

Partridge are getting more numerous. Quite a number have been shot this autumn. The black squirrels are also very numerous.

Overseer Jacob Kern, of Burford, reports that there is good fishing around Oakland and Scotland, and that the fishing in the Creek has improved greatly. He also wishes to state that the bass that were placed in the Creek and Cooley Pond are now quite noticeable, and seem to be doing well. As far as game is concerned, he begs to report that muskrats are very numerous; in fact, quite a nuisance. Rabbits are also very plentiful, and he found quite a few partridge in the west end of the township. There has been no illegal fishing or snaring of animals out of season that he knows of, and he has investigated every report sent in.

Overseer Richard Lambkin, of Loring, reports that during the summer of 1910 the fishery regulations have been well observed. During the season he sold seven angling permits, and the parties were well pleased with the results. Unfortunately they have no speckled trout in that district, and he thinks some effort should be made to stock at least a few of their beautiful streams with them, as they are the most sought after fish wherever found. All the other fish that frequent those waters are plentiful. He would suggest that a number of obstructions between the Georgian Bay and the head waters of its tributaries in that district should be fitted with fishways, as some of the large lakes on these streams will soon be depleted of fish if something is not done.

Deer are holding their own, and no doubt the coming season will make them more numerous, on account of only one deer being allowed to each license, and more especially on account of no dogs being brought in this year from outside points. There is no doubt but the close season for partridge the last two years has made them quite numerous, and some large bags will be taken out this year.

The law on the whole has been well observed.

Overseer Newton Langford, of Dorset, reports that the fishing in Hollow Lakes and other lakes north and east of Dorset has been fairly good. And south of these the fishing in the lakes is better this season than last. If they were protected for a few years they would be the best fishing grounds in Canada. He would suggest that all persons fishing, whether Americans or Canadians, should take out a permit, as it would save a lot of trouble.

Deer are apparently plentiful, and the wolves quite numerous in some parts north of there. On the first of November a man shot a deer, and leaving it walked about twenty rods, and when he came back to the deer the two hindquarters were eaten, and he was not more than twenty minutes away. He thinks a bounty of $25 would exterminate them almost in one season in that part.

Overseer J. H. Laughlin, of New Lowell, reports that as far as he knows there have been no infringements of the law in his district. Several reports have come to him, but when investigated he has found nothing in them. The fishermen in his district report the fishing very poor, except for suckers and carp. Bass are very scarce in his district.

Partridge are becoming more plentiful. The close season last year was a big improvement. Deer are becoming more plentiful. The close season in the County of Simcoe is a great improvement. The only trouble he has is to keep dogs from running them. He has shot several dogs, which he thinks will be a lesson to others. Muskrats are plentiful. Mink are very scarce. It was a good act to protect them. Hares are very plentiful. Black squirrels are very scarce.

Overseer Wellington Lean, of Apsley, reports that fishing has been about the same as usual this year. Bass and salmon trout are the principal fish caught.

He thinks the number of salmon should be limited. There are a number of lakes in his district which have no fish. If these were stocked it would be much better both for the settlers and tourists. Very few tourists visited Loon Lake the past season, as there was only one boarding house open.

Mill owners are all observing the law. One mill owner was reported to be allowing slabs to be put in the river, but upon investigation he found the report to be false.

There are no fishways in his division.

Partridge are very plentiful this fall, owing, he thinks, to the prohibiting of shooting and selling.

Deer are very scarce. He thinks it a splendid idea cutting the number down to one for each person. If this had not been done, in a very few years deer would have been extinct in that locality. Very few settlers said anything against buying a license last fall.

Wolves are very numerous, and are killing a number of deer.

There are several beaver colonies on different lakes in his district. These he has visited several times, and finds no signs of any being killed or traps set. If these are protected a few more years beaver will be plentiful again.

The Game and Fishery Laws and Regulations have been well observed in his district during the past year.

Overseer Manley Mabee, of Cameron, reports that at the time of his appointment as Game and Fishery Overseer on April 15th, 1910, the spawning season was nearly over for bass and maskinonge. They generally start early in April to spawn in Sturgeon Lake and tributaries, and he thinks the close season should start 1st April instead of the 15th, as trolling when the fish are running makes a bad mixture for the overseers. The number of fish caught this year was smaller than usual. Some think that it is owing to the number of gasoline boats, but he thinks that an unusual season accounts for it. There were a great many small dead fish about three or four inches long floating along the shores, and he could not tell what kind they were, although some thought they were salmon. He thinks the law regarding the length of bass and maskinonge should be cut out, as it is claimed that many of them die after being put back in the water, and, besides, it would be better to keep the small ones to make up their count. He says he generally hears about the number caught, but nothing is said about the size unless about a big one.

About guides for fishing. There are poor men who could pick up an odd day's pay if it was not for the guide license, and those wanting guides would have better satisfaction and accommodation, as he has heard that licensed guides get too independent.

Ducks are as plentiful as usual, and partridges more so.

Overseer Enoch Merriam, of Harwood, reports that the fishing in Rice Lake for maskinonge was good. Four Americans came to Harwood on the 2nd June; they fished four days and caught 35 maskinonge and one bass. They had four fish to eat while there, and took the other 32 maskinonge with them, the weight of which was 300 lbs.—a little over 10 lbs. each. He acted as guide for one boat. Three Indian guides from Hiawatha went to Gore's Landing to paddle three Americans, but they could not make a catch. They then came down to Idylwild in his division, stopped two days, and caught all the fish they wanted. They had 15 maskinonge and a few bass, and every one was well pleased with their catch of maskinonge. But the catch of bass was not good, and a great many of the anglers would sooner fish for bass than for maskinonge. He cannot account for the scarceness of the bass, unless it is the so-called mudcat fishers that are catching the bass when on the sand beds and gravel shores, where the black bass are to be found in the latter part of May and the first of June, and in the early part of May the green bass are around the bays on the mud. He went up to two fellows fishing mudcats one rainy day: they were within five feet of the bay and fishing with rod and line in about five feet of water. They were using worms for bait, and they caught six bass in less than fifteen minutes and returned them to the water. They laughed and said that those bass would all be mudcats if he was not there. He has seen twelve boats fishing for mudcats in about two miles. A man told him in the presence of two others that he went out to catch mudcats alongside the bay, and the bass were just coming out of the shallow water, that the bass bit so fast that he had to leave that part. He returned them all to the water, and he has no reason to doubt his word. But he has not the same opinion of every one who comes out to catch mudcats. The man who only wants to catch a few mudcats—or bullheads as some call them—will come out on the water about half an hour before sundown. But there are other parties who come out at 8 a.m., and they fish all day and keep this up till the season opens for trolling. He thinks if these fellows were not allowed to come out till about an hour before sundown, it would be a great protection to the bass, as the mudcats do not bite well till after the sun is down. There were not as many Americans there this past summer, on account of the bass not biting well the year before.

The trapping for muskrats was fairly good last spring, though not as good as usual, owing to the fact that winter rats were a good price, and the poachers went to cutting the houses. He found one party at such work and had him fined, and the money sent to the Government. The rats are hard at work now putting up their camps for winter. Ducks were very plentiful last spring. As there is no shooting done in spring, they stop there and feed on the wild rice and water celery. The two hundred yard limit is a little cramped for shooters in Rice Lake: it brings the party who does not own a point too close to the man who does, and causes a hard feeling among the sports that would not exist if they had a three hundred limit: they would be far enough apart not to interfere with each other. The duck is not like the fish, which has no chance to leave, but the duck is a passer-by. They sit out in the deep water and feed on the wild rice and water celery, then leave when they are fat and go to the American side. He thinks, as well as many others, that the rice beds should be included in the rush

beds. It has got so now that men will lie in their canoes in the heavy rice, watching for ducks flying over; they take very long shots, and do more harm in scaring the ducks than they would if they were shooting from the edge of the river beds out of blinds and over decoys. Partridges are more plentiful this fall, also black squirrels.

There are no sawmills in his division.

He would like to say a few words about frogs. He thinks if there was a protection on them till the first of July, which would be after they had deposited their spawn, they would have as many bull frogs in five years as they ever had.

Overseer Moffatt, of Glen Cross, reports that the fish in his district are trout and suckers, and are about as plentiful as other years. He would recommend the season for trout to close on the first of the month. The law has been well observed, no illegal fishing having been brought to his notice.

The game in his district are mostly foxes, muskrat and mink. The latter are getting scarce on account of their fur being so valuable.

Overseer F. J. Moore, of Lakefield, reports that during the past year the fishing laws have been fairly well observed in his district. He has had a few cases with some of the settlers, but let them off with a warning, which had good effect.

The past spring was the best for fish spawn they have had in his district for several years, for the reason that the water was kept up for several weeks, which gave the small fish a chance to get out of the marshes into deep water.

Tourists have had fairly good luck with rod and spoon this year, particularly bass fishing; maskinonge has not been so plentiful, particularly during the latter part of the season. He would strongly recommend that Stony Lake be restocked with parent bass if they could be got. He thinks it of great importance that the fish supply be kept up in these waters, as Stony Lake is fast becoming a great summer resort for tourists, who come from all parts of the United States, as well as from our own province. He does not think the fishermen would mind paying more for their permits if there was good fishing, as they seem delighted with our waters.

He has issued over two hundred and fifty fishing permits this year, and there are also a number of Americans come here who get their permits on the way over. He has also issued seventeen guides' licenses and two minnow licenses, so that it is easily seen there are a great number of people on these waters during the season. He thinks it would be a good thing if arrangements could be made with the Dominion Government in regard to the rising and falling of the water in Stony Lake in the spring, and he thinks this could be done without much injury being done, if the matter was taken up. If this could be done a great part of the fish spawn would be saved which is now lost by the falling of the water before the spawn gets to its maturity. He would again suggest that the close season for bass and maskinonge be from the 1st of April till the 15th of June, as these fish run as soon as the ice disappears.

The game laws have been fairly well observed during the past year, particularly in regard to deer hunting. He thinks the Fish and Game Department passed a good act when they limited the killing of deer to one for each hunter. Ducks are not very plentiful in his district. Partridge are more plentiful this season. He would strongly recommend that open season for plover and ducks and water fowl of all kinds come in at the same time, as parties shooting plover sometimes kill ducks as well. Trappers have had a good season, particularly trapping muskrats. Mink is very scarce.

He would suggest that the carrying of firearms be prohibited in that district in the close season, as there are so many people on the water in the summer. It is very dangerous and there is no necessity for it. If this could be done it would put a stop to some parties killing ducks before the season opens, and he thinks it would be better for all tourists and cottagers.

Overseer J. W. Morton, of St. Ola, reports that fishing in that district has not been as good as in former years, particularly in Salmon Lake; trout seem to be diminishing, but are more plentiful in Devil Lake.

He did not sell nearly so many angling permits this year as other years, and did not sell any net licenses.

Duck shooting has been somewhat better than last year; ducks being more plentiful.

Partridge are on the increase and quite plentiful. So much for the close season.

The close seasons were well observed as far as he has any knowledge. There are no fishways in his division.

Deer are quite numerous; also bear, rabbits and squirrels.

Overseer James Myers, of Orchard, reports that the fishing was about the same as last year. Fairly good catches were made, and some large trout were got by some of the fishing clubs. All were used at home, and none sold that he is aware of. One party had undersized trout, and another party shot a duck out of season. Both were reported to the Department.

He believes the close seasons were very well observed. There was one violation of the Fisheries Act settled out of court, and one of the Game Act not settled yet.

No sawdust or mill refuse is allowed to go in the water, that he knows of. There is one fishway in his division in fairly good condition.

It is the wish of the fishing clubs in his division that the trout season should end the 1st of September instead of the 14th. Speckled trout and bass are the principal fish in his division.

Overseer J. R. McAllister, of Gore's Landing, reports that the law has been very well observed by every person. There have been a great many maskinonge taken, and large-mouthed bass, but the small-mouthed bass were not nearly so plentiful. There have not been so many non-residents fishing at Gore's Landing this season as last.

Ducks are very plentiful at the present time. Grouse are very scarce in that part of the Province, but black squirrels are getting to be very numerous. He would like to see the law made to forbid carrying guns on the lake, or on the shore shooting snipe, plover or rail, which birds are on the same grounds as the black and wood duck, until the open season for ducks, as it would make it a great deal easier for the overseer to enforce the law.

Overseer A. W. McIntyre, of Keene, reports that there was a good catch of fish in his division (Rice Lake) this season—much better than last year, both for lunge and bass.

Ducks are very plentiful, and duck hunters are very well pleased with their sport, some shooting as high as forty per day. He thinks partridge are more plentiful, although there are not many around there. Muskrats were very scarce last season. Some trappers would like to have taken out licenses to trap rats. He has no infractions to report, as he thinks the law has been well observed.

There was no mill refuse or sawdust put into the water, except once when the floor of the mill broke down and let some sawdust down, but the floor was repaired at once.

Overseer Peter Nichols, of Bridgenorth, reports that in his division fishing was good during the first of the season, some very large ones having been caught. Just before the ice broke up last spring there was a large number of bass taken out. He thinks, to prevent this, it would be a good idea to have the close season begin one month earlier.

He secured four nets, which he reported to the Department, and has the nets yet.

Ducks are plentiful, but partridge are scarce. He thinks it would be wise to protect them for a year or two longer.

Black squirrels are more plentiful, but thinks it would be well to protect them also.

Mink and muskrat seem to be very scarce. He thinks they should be protected for at least two or three years.

Hares have become quite numerous.

Frogs are very scarce and should be protected for a time.

Deer hunting was very good last season, and, according to reports, it will be as good this.

Overseer B. B. Ostrom, of Frankford, reports that in his district, with a few exceptions, the law has been well observed. He found the most trouble with foreigners who do not observe the laws. He succeeded in making several convictions, which has had the desired effect. The fishery laws were well observed. He only seized one net, and confiscated one box of undersized pickerel being shipped out of the country. The bass and pickerel are plentiful. He saw one fine catch of 50 lbs. in three hours, the undersized ones being thrown back. The black and grey squirrels are increasing and numerous. Partridge and hares are plentiful, and he has had some trouble in keeping hounds from running. The residents assist him very much in keeping the Fish and Game Act.

Overseer H. B. Parker, of Bobcaygeon, reports that the spawning season for maskinonge last spring was an ideal one, one of the best that he has seen for years, owing to the water being held at a uniform level until the spawn were all hatched and the young fish able to get to deep water before it fell. The results are to be seen this fall, as there are numbers of the young fish to be seen in the marshes, more than he has noticed in previous years. The bass were practically through spawning before the open season, and the young bass also seem very numerous. The bass fishing for this season was all that could be desired, the catches as to size were good. The maskinonge fishing in the first part of the season was poor, but later on was fair, the only reason he can give being the deep water. He would suggest that a fish hatchery be situated at either Bobcaygeon or Fenelon Falls. It would be a benefit to keep the fish replenished, as there is a big drain on fish on all our Kawartha Lakes, owing to so many tourists.

Ducks are about the same as usual. The late fall ducks seem unsettled and are all over the lakes which makes it hard for the sportsman to get a good shoot.

Partridge are very numerous indeed, owing to the previous protection and sportsmen pleased with their shoot. Mink are scarce, but the protection on them may have the desired effect. Muskrats seem to be fairly numerous, and are at present building up their little homes for the winter. The water is very low which

makes it hard for them to winter if the water rises after the lakes and bays freeze over. He would recommend that no trapping or taking of muskrat in any way be done during winter months, as it is a temptation for men to hunt them from their homes only to be drowned or starved to death. Deer seem to be more numerous this fall, as he has seen several, and signs through the woods show indications of many. The taking of only one deer this fall should have an effect as to their increase. Beaver are increasing, and it is a hard task to keep poachers from catching them. There are little colonies springing up different places which he was surprised to see this summer, and they would soon increase and multiply if left alone.

He has had several infractions of the Game and Fisheries law, and lots of work yet to be done. He would suggest that the following amendments be added to the Game and Fisheries Act for the better protection of game and fish:—

(a) That there be no fishing through the ice whatever.

(b) That the open season for mink be from 1st November to 1st March.

(c) That frogs be protected for three years.

(d) That the open season for muskrats be from 15th March to 1st May.

(e) That no light of any kind be used for hunting or catching any animal or bird.

Overseer Chas. W. Parkin, Valentia, reports that he is pleased to be able to say that there were more maskinonge captured this season in his division than for many years. A large number of tourists visited Scugog Lake during July and August, and all seemed well pleased with their success in taking large lunge. A few Americans visited there during the season, and they looked more favorably on the Angling License Act. He sold four permits, some bought permits in Toronto, not knowing they could secure them from him. Bass fishing was not as good on account of their being slaughtered through the winter. He would like to see the winter fishing prohibited, and would respectfully suggest that the close season for bass be from Dec. 15th to July 1st, and for maskinonge from Dec. 15th to June 15th.

He thinks the muskrats were quite as numerous here last spring, but there were not as many trappers, and he thinks that accounts for there not being as many taken in his division. They are busy now building their homes for the winter. He is glad to know that our valuable little mink is now receiving protection, and he hopes to see them rapidly increase in numbers. He says it is a pleasure to report that partridge are more plentiful in that vicinity now than they have been for years. Ducks were there in large numbers last spring, and, owing to the good protection they received, a number of Blue Bills and Red Heads remained in the marshes all summer and hatched their brood there. There are thousands of the best duck there now, and the hunters are well satisfied with their sport. The open season coming in on the 15th Sept. necessitated a closer watch and more patrolling during the first two weeks of the month to prevent the snipe and plover shooters from taking duck, but in his opinion it was better for the ducks.

His home is so located that he can watch a large portion of his division with the field glasses every day, and whenever he thinks there is a necessity he travels around and investigates. He has been very watchful trying to protect the fish and game of all kinds from the few greedy and unsportsmanlike persons. He has had no occasion to impose any fines as yet, but has a couple of cases to be settled.

The Government boat "Naiad" has had a beneficial effect and has been a help to the local overseers. The people see that the authorities are in earnest, and that they mean to protect our valuable fish and game.

Indian Camp, Kensing Point, 30,000 Islands of Georgian Bay.

Houseboating among the 30,000 Islands of Georgian Bay.

Overseer Colin Robertson of Hillsburg, Ont., reports that he has been over his territory several times during the season and is pleased to state that the Game and Fishery Laws have been well observed. The fish in his division are mostly all brook trout and the fishing for the past season has been good; he is of the opinion that the close season for brook trout should begin earlier, say Sept. 1st, instead of the 15th. The Caledon Mountain Trout Co. still own or control a large portion of the waters there; members of the Company have had a great season and a large number of beautiful trout have been caught and taken away; the Guelph Fishing Club that control one of the ponds there also had a good season. The law regarding the disposition of sawdust, etc., by the mills has been well observed. No large game in that section. Foxes and rabbits are plentiful; partridge are scarce. As far as violations are concerned, he has none to report.

Overseer William Robinson of Kilworthy, reports that the fishing has been fairly good in his division this year, and the law has been well observed. There have been more Americans on Sparrow Lake and Kashesbebogamog Lake this season than there have ever been before.

Muskrats do not seem to be as plentiful as last season. Mink is about the same, also partridges, and as for beaver he has not seen much of their work, but the otter is increasing fast. He has a little trouble watching the Indians concerning the otter, as they are bound to have them. Ducks are about the same as last season, and deer seem to be better than they were during the last few years. He would like to see the Department stop the use of rifles in hunting partridge, as in the open season for deer they can hunt partridge too, and if an overseer meets a man with a rifle and asks him for his license, he can say he is hunting partridge.

Overseer Neil Sinclair of Glenarm, reports that there have been very few fish caught in his district this season. There appear to be lots of fish in the lake, but they would not take the bait. The water being very high all season, they seemed to get all the food they wanted. There was no illegal fishing brought to his notice.

There are no deer in his district. There are lots of wild ducks on the lake this fall. Partridge are getting quite numerous since they were protected. Mink and muskrat are getting scarce in that locality.

Overseer John Small of Grand Valley, reports that only one breach of the game laws came to his notice during the past year, and this was for shooting a deer out of season. The party was brought before a Justice of the Peace and fined. This matter was duly reported at the time. The fishing laws were particularly well observed.

From reports and from his own observation, both partridge and rabbit are becoming more plentiful. Practically no wild fowl have passed over there this fall. Deer are still increasing slowly.

Overseer William Smith of Gravenhurst, reports that there has been a good observance of the game and fishery laws in that section. Only in one case has there been a flagrant breach of the law, and that was a party he caught with an illegal catch of fish. He was brought before a magistrate, and was fined, and this example and vigilant patrolling have had a good effect. For three months he patrolled the lakes in the "Muskoka," and visited many parts inaccessible by the larger liners. The number of fishing licenses sold this year has increased, and with the interest taken by those interested in preserving our finny game, the sales will be increased no doubt yearly.

There has been one carload of fingerlings deposited this year in those waters. There is a movement on foot by some private individuals to raise funds to establish

three hatcheries on the Muskoka lakes, which, if successful, will do much to keep up the stock of fish.

Doubtless the patrol boat "Meenagha" has been an unqualified benefit to the fish protection, giving a wide advertisement of law enforcement, and that the Department were wide awake to their duties.

Overseer C. St. Charles of Madoc, reports that during the past months of the present year the fishery laws in his district have been very well observed. There have been no convictions, and very few complaints. Pickerel has increased a great deal, the catch being larger than previous years. The fishing in Moira Lake is done almost wholly by residents of the village of Madoc, and is carried on more for the sport than for gain.

The game laws have been well kept this year. There was one conviction on Dec. 21, 1909—that of a man being found guilty of illegally having in his possession 10 partridges. He was fined $50. There were a few complaints of men hunting deer without licenses. They were all convicted.

Game is scarce in and around that locality. There were very few ducks, and they are getting scarcer every year.

Wolves are plentiful in the Townships of Tudor, Grimsthorpe and Lake. They destroy numerous deer.

Overseer William H. Switzer, of Gooderham, reports that the close seasons for fish were well observed, no instances of illegal fishing having come to his notice. The salmon trout catch was up to the average, some fine specimens having been caught. The catch of black bass was better than last year, some lakes having been stocked three or four years ago, which are giving some return this year. They were stocked by the settlers from other waters. There are salmon trout, speckled trout, brook trout, and black bass in his district. There are no fishways in his district. No fish were exported, but all used for home consumption. As far as he knows, the mill owners have observed the law fairly well. There were no tourists visiting his district, to his knowledge.

The game laws were well observed. Deer seem to be getting more scarce. He often saw deer years ago in his travels, but has not seen one alive for three years now. He thinks that dogs should be prohibited for a few years, as he has heard of a great many deer being slaughtered to feed the dogs in the winter. Ducks are scarce, and he thinks that the cause is that there is no wild rice in his district. There are quite a lot of muskrats and mink, and some beaver and otter. He has heard of a number of beaver houses being chopped open last winter, and the beaver taken away. He believes there is a quantity of beaver and otter fur carried out by fur buyers. One otter pelt went out by mail. Partridge is plentiful. The wood hare or cotton-tail are quite numerous. There are no black or grey squirrels in his district. He thinks the partridge should be protected, or in a few years they will be as scarce as they were two years ago. There were a great many out after them this season.

Overseer Frederic Taylor, of Huntsville, reports that bass fishing was good this season, and they appear to be on the increase; but, according to information gathered from people on Lake of Bays and Peninsular Lakes, the salmon fishing was not as good as last year.

No fish were exported.

No abuses existed.

The close season has been well observed this year, and he has had no complaints.

No illegal fishing has been done to his knowledge, and he has had no complaints of any being done.

There has been no dumping of mill refuse in these waters this season, although considerable sawdust is blown into the river from the mills at locks in Brunel, and will continue until a proper burner is built.

Overseer George Thurlow, of Nairn Centre, reports that bass, pickerel, whitefish and pike are very plentiful in that locality, most of the fish taken being pike and bass. There is very little netting of fish there, nearly all fishing being done by hook and line. Considerable illegal fishing has been done during the past year.

Very few ducks are to be found in those waters, and no wild geese. The waters are all mostly rock-bound without any feed. Partridge have been plentiful this year, and a great many shot. His opinion is that one month open season will be quite sufficient, and if the law can be strictly enforced for the eleven months they may hold their own. Deer have been more plentiful in that locality than ever before One party of seven filled their number the first week, and another party of eleven did the same. About two does to one buck is the proportion of the killed. Two other parties are to be heard from yet. Local hunters have all filled. No moose licenses have been taken out this year, and none have been killed so far as he knows. Parties of hunters who have come in there from ten miles north report wolves very numerous. One hunter who has hunted every fall in the same locality for about twelve years reports that they are increasing in numbers, and every night they are to be heard howling round their camp and in full chase after deer, presumably. He thinks that if a higher bounty were placed on them, it might induce some venturesome hunters to take up the job of exterminating them, for there is no doubt they destroy a great number of deer. A number of bears have been seen by deer hunters, but none bagged, so far as he knows. A number of colonies of beaver are reported, and they are evidently increasing rapidly, and will need looking after, as a great many of the 1,000 or more lumbermen who go in from Nairn Centre go armed with traps, and many of them with guns, and by trapping add quite a nice sum to their winter's wage.

Overseer Ira Toole, of Omemee, reports that the maskinonge fishing this year has not been very good in his division—not nearly so good as last season. There seemed to be plenty of fish, but they would not bite, largely owing, he thinks, to there being plenty of small fish for them to feed on, as the water seems to be full of them. Bass fishing was very good.

Frogs are increasing there, but they should have a close season of at least two months in the spawning season all over the Province. There is a lot of money made by shipping frogs' legs, and they should be protected in the proper season as well as any other game.

Partridge are more plentiful this year than usual. Ducks were quite plentiful about the 1st September, but not nearly so many black ducks were to be seen when the season opened on the 15th September. If the duck season is left as it is now, the season for shore birds and waders should open at the same time, as it is impossible to protect the ducks the way it is now. The shooting for fall ducks has been good so far, and the best shooting is usually later in the season. Muskrats are holding their own very well, considering the number of trappers that are after them now in the spring. There was about $2,000 worth of muskrats sold out of his division last spring, which makes it quite evident that they are protected in the

close season. Mink, as usual, are scarce, but the close season will help them, if it is left as it is now until December 1st, as they can get under the ice and snow, if there is any about that time. The game laws have been very well observed, but he finds it necessary to keep moving a good part of the time to keep it that way.

Overseer John Traves, of Fraserburg, reports that the bass and trout fishing has been good this season.

Deer was about the same as the year before, most of the hunting parties getting their number. Ducks were very plentiful last fall around that vicinity. Partridges are on the increase very fast. Beaver and otter are very plentiful. Mink is very scarce. Muskrats are very numerous.

The laws have been well observed, there having been no violations. He has watched and taken a great interest in preserving the game.

Overseer S. Turner, of London, reports the game and fishery laws in that district of the County of Middlesex as being very fairly observed. There have been some infringements of catching undersized bass, but the guilty parties have been mostly small boys, whom he has let go with a warning.

Bass, pickerel and pike fishing has been very good there since the nets have been removed from the river. Fishing would have been much better if they had had a more favorable spring. This was owing to the fact that when the water was high and suitable for the fish to run, the river was full of ice, and when the ice went the water also went, which stopped the run. However, the fishing, on the whole, was very good there.

The game laws have also been very well observed there. The only trouble he has had was with a fish dealer, who was displaying and offering for sale wood hare or cotton tail rabbits after the 16th January. He warned him several times, but he persisted in saying they were not wood hare or cotton tail rabbits, but only common rabbits, and to find out who was correct he had him prosecuted before the police magistrate of that city. He secured a verdict, but lost on the appeal. The magistrate's opinion was that the game law was broken, but the judge on the appeal quashed the conviction, on the grounds that they were not wood hare or cotton tails, but simply a wild rabbit, and a nuisance to the community at large. This prosecution has been the means of making the law governing this matter very plain, as the Act now states that the game has to be handed to the nearest officer of the department for distribution to charitable institutions.

There is only one fault or complaint he has with the game laws, and that is as regards the season for woodcock. He thinks the season should be from 1st October to 15th November, both days inclusive. His reason for this is they are a migrating bird, and always leave there about the full of the moon in October, or after the first hard frost, and their neighbors to the South receive the benefit of their breeding ground.

Overseer C. Twamley, of Cavan, reports that the trout are getting very scarce in a creek in his division, and he would like to have fishing in it prohibited for two years. The bass were very late in coming up this spring, and did not leave their beds until long after the 15th June, but were as plentiful as ever.

Ducks are very scarce there this season, while partridge are more plentiful.

The law has been fairly well observed.

Overseer John Watson, of Caesarea, reports that matters are getting better all the time as regards the keeping of the game and fishery laws. The maskinonge fishing has been splendid the past summer, and on his trips around the lakes he

caught 26 weighing 270 lbs., and there were lots of bass also. But he would recommend that the day's catch be reduced to two maskinonge and four bass, and the close season to be from the 1st April to the 15th June. He thinks that the large sluiceway in the new dam at Lindsay will admit the free passage of the fish in the spring.

Re Game. He would advise the open season for mink to be from the 1st November to the 31st December, as this would allow them a chance to increase.

Ducks are becoming more plentiful every year, as they stay and hatch in the marshes, on account of the close protection in the spring from shooting and driving them out.

Regarding the prohibited hours for shooting game: He finds that the overseer cannot cope with this matter, and he would suggest that the time be changed to sunrise and sunset, and then if a man is found on the hunting ground after sunset, and not in the act of getting out, that he be liable to a fine.

Partridge are on the increase all over his division.

Now as regards open season for snipe, rail and plover, and all other birds known as shore birds or waders, he thinks that the season should open on the 15th September with the duck season, as the birds will be in better shape, and it will save a lot of work to the overseers, and also save a lot of disbursements. He also thinks that all trappers should pay a license of at least $5 each for trapping and shooting. He thinks that they should have a gun license of two dollars, except to farmers on their own lands. This of itself would do away with a lot of pot hunting or poaching, and prevent accidents with small boys using guns.

He would recommend that the taking of muskrats, frogs and speckled trout be prohibited for the full year of 1911, at least that is in the Counties of North and South Ontario, North and South Victoria, the united counties of Northumberland and Durham, and Peterborough County, as they are becoming very scarce in those counties.

Overseer John Watt of Peterborough reports that the fish run this year was unusually long, commencing early on account of the very warm weather in the latter part of March, first of April. The cold weather setting in a little later on seemed to drive the fish into deep water for a time to return to the shallow waters towards the end of the close season and the early part of the open season.

There was not as large a catch during the open season this year as in some previous years owing he thinks largely to the fact that the Government dredge was taken below the C. P. Ry. bridge, necessitating the drawing off of about five feet of water from the river and lake. For some time after this the fishing was very poor, but some fine catches were made later in the season.

By keeping a constant patrol on the waters here is the only way we can possibly preserve the fish during the close season and hope to have any good fishing when the open season comes in.

Part of the fishing ground in his territory is within the limits of the City of Peterborough, and along this portion of the river front there are fifty or more boathouses each containing from two to five boats so you may understand the amount of trouble he experiences in trying to enforce the fishery laws. If the lovers of angling among the owners of these boathouses would assist in any small degree in endeavouring to compel others to observe the law there would be no better maskinonge and bass fishing anywhere, but he gets very little information as to infractions of the law from them.

Through the valuable assistance he received from Mr. T. Guerin he was able to keep the poaching down to the minimum—in fact he has not heard of any violations, except in a very few cases of fish having been caught which were under size.

By request, Mr. Guerin visited a section of the district which is outside of his territory, and on July 1st last, made a raid and captured five gill nets in the one night.

He built a fire in front of his boathouse and in the presence of a number of gentlemen destroyed twenty-two gill nets, some of which were one hundred feet in length and all of them long enough to span any of the creeks in that section.

He fined two persons five dollars each with costs for violations of the fishery laws.

The fish and game laws are to his mind being more strictly observed than formerly but he feels more and more the necessity of an overseer devoting his entire time to the duties of his office in order that he may more effectively carry on the work of preserving the fish and game and preventing the breaking of the laws governing the fishing and shooting.

Nearly all of the American citizens who have stopped there on their way to fishing resorts have been supplied with their angling permits, of which he sold twenty-three this year. So far this season he has sold twelve game dealers' licenses, and there is a possibility of a few more being needed a little later on.

Overseer Chas. West of Holland Landing, reports that there has been very little change in his division from last year. The fishery law has been well observed during the close season, and he had no occasion to prosecute any one. The parties who do the most fishing there are chiefly local residents, and they inform him that black bass are on the increase. He has not noticed any change in the catch of maskinonge this year.

Re game. There are only a few flocks of ducks that stop there on their flight, on account of the rice being destroyed by the carp. He has every reason to believe that the partridge are on the increase since they have been protected.

Overseer G. W. West of Holland Landing, reports that he has found the law well observed this season. He does not find much difference in the catch of maskinonge. There have been a very few caught in the open season, but he thinks that is on account of so many carp. Black bass is on the increase, and so are small fish and coarse fish.

Ducks and all kinds of game birds are very scarce on those waters this season. He thinks partridge is on the increase. Hares and cotton-tail rabbits are quite plentiful.

Overseer Hugh Wilson of Elphin, reports that he found no fishing, only with hook and line, and found bass and pike more plentiful than in years past. Had two convictions in his district last December. Ducks were scarce this fall. Partridge are in great numbers, but are being shot in large quantities by local sportsmen. He would suggest they be protected in 1911.

Overseer E. A. Wootton, of Maynooth, reports that he has tried to keep the people posted in the Game Laws with marked success, and is glad to be able to report no convictions. He had a report in July of netting in the Papineau, but could not locate nets and did not know who was doing it. Speckled trout are quite plentiful. Salmon trout seem to be rather scarce and rather under the usual size.

Deer are plentiful in many sections, but in other sections the wolves are plentiful, and these are the worst enemy of the deer. If some effectual means could be adopted for killing the wolves, there would be plenty of deer. Partridge are plentiful in some sections, and in others very scarce.

Overseer W. J. Wright, of Ice Lake, reports that the game fish in Kagawong and Ice Lakes are about the same as last year. There were a large number of Americans there this year, but not so many Canadians, and nearly all report good catches of black bass. He does not think there was the same waste of fish at the hotel at Kagawong this year as last—if there was, he did not see it. He would strongly recommend that all outsiders pay a license to fish, whether they come from Buffalo or Toronto, and that the only people who should be allowed to fish without a permit is the actual settler. He has no trouble with the Americans. The guide sees to it that they do not exceed the limit. In his opinion, if there are favors going, it is the American who should get them, for he brings the money into the country and pays his way at the hotels and boarding houses, while the man from Ontario brings a tent and a box of hard tack, and then you have to watch him, as he has no guide.

Deer are on the increase there, as there were not many killed last fall, and the winter was favorable for them. Ducks are also on the increase, in fact there are very few shot, except the sawbill, on account of the change in the close season from the 1st to the 15th Sept. The black and grey duck leave there about the 5th Sept. He has had one conviction for illegal duck shooting. Partridge are very plentiful, owing to the past close seasons, but he is sorry to say that next year's report will be different, for any one can go out every day for a month (except Sundays) and shoot as many as he can find. He would limit every man to 20 birds for the season. He had three people up before a magistrate for partridge shooting in close season, but the magistrate reserved his decision. Mink and muskrat are about the same as last year.

There was some trouble over guide licenses at Kagawong the past summer, in fact there was not one American that held a guide's license. He thinks that the local overseer should be allowed to recommend all such licenses, and no one else (subject of course to an appeal to the Superintendent), for he has to work with these men, and should be qualified to know who should have a license and who should not.

RIVER ST. LAWRENCE.

Overseer Nassau Acton of Gananoque, reports that in his division, which is from the foot of Wolfe Island to Rockport on the St. Lawrence and Gananoque River, there are no licenses issued other than a guide's license and a few minnow licenses. In connection with the catch of fish, he says it is impossible to give anything like an accurate amount, but it has been one of the best seasons for angling there has been for years. As to maskinonge and bass, their principal game fish, the tourists have been well pleased with the catch. One man caught three maskinonge in one day. The fishery laws have been well observed, and he has had no complaints.

Re Game.—The principal game there are ducks of various kinds, a few partridge, and black and red squirrels, which are fairly plentiful. Ducks on the St. Lawrence have been more plentiful than usual. One man reports getting forty-eight in one day.

There have been no cases reported of any violations of the Game Laws. He distributed all the copies of the Game and Fishery Laws which were sent to him. His opinion is that they should be sent out freely to the people, as they call daily for them. The "Journal," one of the local papers, has published the changes in the law quite freely, which is a good thing, as the people seem anxious to be posted regarding the law. He is satisfied that the close seasons have been well observed, and this accounts for the increase, both in game and fish.

Overseer Matthew Cox, of Howe Island, reports that he has not found any illegal fishing being done in his district this year. The pike do not seem to be so plentiful as in other years.

The duck hunting is good, but there is no plover around those parts.

Overseer James A. Fraser, of Prescott, reports that there was only a fair amount of fishing done this year in his district. Bass was very scarce. He went down to Lancaster in February and seized five spears, and two at Bainsville, which he destroyed. In April, he went up the river and seized four nets near Jones Creek, and two nets and a canoe east of Rockport, some of them being from American side. He also had a chase after an American who was shooting ducks, but could not catch him. On July 16th, he seized a set line from an American, and on August 21st, seized one lot blocks and lines, and fined the man $5: also fined another $5 for fishing for minnows without a license. He finds it hard to catch these poachers, as they keep tab on one pretty well. The public are very good about telling one that so and so happened, after it is all over, but when asked for names, they are dumb and will not tell any more, being afraid of their names being known.

The gun is being used pretty freely along that part of the St. Lawrence, and from reports, from different parties he has met, he finds there is some poaching, which is hard to stop. A policeman who was crossing the river on the ferry saw a man open his valise when he arrived on the American side and show some friends a fine lot of partridges he had shot or bought, and was laughing over the nice way he got away with them. On the other hand, some of the citizens will take a lot of birds when they get a chance, for a gentleman told him in the way of a complaint that a man shot 160 ducks in one day, which he thought was too much. He also heard of a man shooting a similar quantity of partridge, which looks as if there should be a limit for those two kinds of birds.

Overseer James McNairn, of Iroquois, reports that all fish in general, except bass, were as plentiful as in previous years. The cause of the scarcity in the bass is that the spawn is being eaten up by suckers and mudpouts, which he has seen them doing several times.

No fish were exported, all being used for home consumption. There were about two tons consumed.

The only abuse that exists is the allowing of suckers and mudpouts, which he thinks should be removed from the river and feeding grounds.

The close seasons are strictly observed, and all precautions taken to see that they are.

No violations of the Act came to his knowledge.

There are no mills dumping sawdust into the river.

There are no fishways in his district.

With regard to game. Partridge are more plentiful than they have been for several years, which is the result of being protected for some years.

Overseer William Russell, of Cornwall, reports that it has been a great season for pickerel and maskinonge, which is what they have not had for a number of years.

Ducks are also very plentiful this fall.

Overseer Geo. Toner, of Gananoque, reports that during the past year fishing in the part of the St. Lawrence assigned to him to oversee—from the head of Howe Island to Rockport—has been good. The fish in these waters are evidently increasing in number, and although many of the game fish are not large, yet it is evident that with efficient supervision and protection the former reputation of the district as a sportsman's paradise will soon be restored. Many American visitors fished in these waters during the past summer, and all were well pleased with the prevailing conditions. It was seldom that they did not catch their full quota of game fish allowed by the law. The guides' reports are very encouraging indeed.

It is to be regretted that there has been a lot of illegal fishing done here, and he has made strenuous efforts to put a stop to it. He has seized and confiscated a large number of nets.

One man was fined $50.00 and costs for illegal fishing, another was fined $25.00 and costs for interfering with him in the discharge of his duty, another was bound over in bonds of $600.00 to keep the peace, one man was sentenced to fifteen months at hard labour in the Central Prison for interference and threatening to burn him out.

From the seizure of hoop nets he has learned that dogfish as well as game fish are increasing in number. He has found as high as seventeen in one bag, and it is a question whether it would not be advisable to devise some means to keep down the number of these fish.

During the spring of 1910 ducks were very plentiful, especially in the swift water below Gananoque. When the river opened up in that part, and before it was possible to take a boat out, there was some poaching, but he drove to the place where the illegal shooting was being done, and he has reason to believe prevented the great slaughter of ducks that characterized the spring of former years. Ducks are also very plentiful this fall, and the law is very well enforced and observed.

He regrets to have to report that the unlawful destruction of rat houses during the winter months is having a very detrimental effect. Muskrats are evidently becoming scarcer each year. He has taken as high as fifty-four traps from rat houses that were cut open in the month of March, and had the owner fined $25.00 and costs, but some more severe penalty will have to be imposed in order to have this law properly observed.

Lakes Simcoe, Couchiching and Sparrow.

Overseer Samuel Coulter, of Gilford, reports that the fishing season of 1910 has been practically the same as in former years. There have been quite a number of bass caught, but very few lunge, as there was but little trolling done. He cannot say that the law was very well observed, as last winter he fined twenty-four parties, and he thinks that was not all who should have been fined. He thinks there should be a spearing license granted for three winter months, as the people around Lake Simcoe never have a chance to get a fish except in winter time, and they feel the fish are protected for the benefit of the summer tourists. The people also feel that the Department think the tourists are a benefit, but the farmers do not consider them any benefit to them.

He says that there are millions of carp in Lake Simcoe and the Holland River, and they are there to stay. When the marsh land is flooded in the spring they are there in millions, and parties can stand in one place and catch dozens of them with their hands without ever moving. Some will weigh as much as 18 lbs. They average about 10 fish to 100 lbs.

He says it is for the Department to find means of making use of these carp, and also find means of catching them after the water leaves the marsh, as they will go back into deep water, but there are thousands of them never get back. They become tangled in the marsh grass when the water leaves, and when men are cutting marsh hay they find the skeletons.

There have been a few ducks shot this fall, but they are not very plentiful, as there is not the rice to feed them that there was in former years.

He thinks the Government should pass a law against trapping in Cook's Bay for at least a couple of years. About a year ago last spring muskrats were very plentiful, and they appear to be trapped clean out. Last fall he hardly saw any muskrat houses.

Overseer George G. Green, of Bradford, reports that the fishery law has been well kept, better than ever before, and he has received support from the citizens, who have at last apparently realized the fact that our waters are about depleted of our best game fish. Very few maskinonge have been caught during the open season, but several black bass—more than he has ever known to be taken in the river—were caught this year, possibly owing to feed being scarce in the lake. One good catch was reported nearly at the head of the river, or eighteen miles from the lake. The carp are just as destructive as ever, and he blames these for the scarcity of both game and fish. It is hoped that seines will be operated there next year. He asks the assistance of the Department in making an effort to rid the waters of these fish. He has secured a small net, which he now has.

Duck, as usual, were very scarce, only a few black nesting there, and not more than 15 birds having been killed all fall. Owing to the marsh drying up, there were practically no snipe. Partridge were perhaps a little more numerous, a few having been taken. Black squirrels are getting scarcer each year, but there are still quite a few in the big bushes. He would recommend that a close season be placed on the river for trapping, as even the muskrats are being cleaned out, and a couple of years would help it considerably.

Overseer Robt. Leadlay, of Barrie, reports that there has been more whitefish and trout caught with night lines in Kempenfeldt Bay, than for some years.

Herring are being caught in large numbers, and are more plentiful than ever before. Bass are small and scarce. Pickerel and lunge are seldom seen in that Bay.

Partridge are pretty scarce, but ducks are more plentiful this year.

Deer are also increasing in numbers.

He has had but one conviction, and that was for exposing fish for sale out of season.

Overseer Harry Mayor, of Painswick, reports that the Fishery and Game Laws have been fairly well observed in his district. There were a few attempts made at jacklight fishing early in the spring, but he is satisfied that if any illegal fishing has been done there, it has been of a very trifling nature. He is pleased to report a decided increase in trout and whitefish, and never has he seen the herring so plentiful. He regrets, however, that bass are decreasing in numbers, and believes the time has arrived for that lake to be re-stocked with this variety of fish. He believes the cause of the decrease in bass is due to the waters being overfished by

The "Navarch."

the army of anglers who reside on Lake Simcoe during the summer months, and who, with their motor boats (which offer such easy and quick facilities for moving around) travel from point to point and shoal to shoal, ever fishing for bass.

In regard to game, hares, black squirrels and other small varieties of game are quite plentiful. A few coveys of partridge have been seen, and wild ducks are very numerous this fall.

Overseer H. McDonald, of Beaverton, reports that to the best of his knowledge the game and fish in his district were as plentiful this year as in former years. He had some trouble during the winter, stopping spearing through the ice, as the fishermen were expecting to get license. He would recommend licenses for spearing during the winter, as he thinks it would help to stop the netting in the fall. He had two parties fined before the season opened for shooting ducks. The close season for bass was well observed this year. During October, and while on board the "Naiad," they grappled some 2,000 yards of gill net. The "Naiad" has done good service this year.

Overseer Wm. McGinn, of Orillia, reports that bass fishing or angling in Lake Simcoe has been very poor, and what bass was caught was on an average small. Salmon trout fishing has been exceptionally good, both spring and fall, especially the fall season. The close season for trout in Simcoe should start the first of October, instead of November, as this is the month they spawn in Simcoe. This would add greatly to the protection of trout in future years.

They have also another fish called Richardson White Fish, which seldom, if ever, reach the two pounds limit, and are in abundance. They are of no use to the public, as they come under the head of whitefish, and anything under two pounds in weight is not allowed to be caught in these waters. This particular species of whitefish should be allowed to be caught under two pounds in weight, as there is not one in a thousand of them weighs two pounds.

Bass fishing in Lake Couchiching this season has been exceptionally good. He has seen some splendid catches made this summer. Maskinonge has been also good. They are becoming more plentiful every year. We have a few pickerel, which are getting better every year, and an abundance of rock bass, sunfish and perch, and also any amount of that noble fish called the German carp. In a few years, it will be one of the best marketable fish we will have in our waters. They are very productive, and grow very large. When caught in proper season, say April or May, they are a good firm fish.

He has spent considerable time this season patrolling his beat, both on Simcoe and Couchiching, and he has had very little trouble from illegal fishermen. There has been very little of that done on his beat. He has only taken up one net this fall, about two hundred yards. There were five trout in same.

He also chased three different parties in the night. Had they been left alone, they would have set nets on his beat. They managed to get away from him as they took the bush.

Duck is very scarce. There is no feed for them on these waters. Partridge are very plentiful this season, also rabbits. Black and grey squirrel are almost extinct in that section. Muskrat and mink are very scarce. They have no deer in Simcoe. They have gone back further, on account of the Canadian Northern road going through that portion of the country where they were.

He may say that he is thankful for the assistance he has had from the steamer "Naiad" through the summer, and especially this fall, in the protection of trout.

Captain Carson has done a noble work, and if he is stationed here for a few years, Simcoe will be one of the best trout lakes in the Province of Ontario.

Overseer Donald McPhee, of Uptergrove, reports that in Lake Simcoe trout have not been so plentiful for a number of years as they were in May, 1910.

Angling for trout during October was especially good, and the law was well observed, both in and out of "close season."

Whitefish were plentiful.

Bass were unusually small in Lake Simcoe. Tourists report some very good catches.

Angling was especially good in Mud Lake. Tourists relate glowing accounts of their summer fishing.

Bass, pickerel, and maskinonge are the chief specimens caught.

Duck are very plentiful in his district.

Owing to the scarcity of water in their places of harbor, the muskrats seem to be scarce.

Partridge are increasing in his district.

Mink are very scarce.

Carp in Lake Simcoe are rapidly on the increase.

One case of illegal fishing was noted, and the offending party was promptly fined.

The law was well observed during the past season.

Overseer H. S. Thomson, of Brechin, reports that trolling for trout in spring was as fine as he has seen for ten years, but not so good this fall. He tried trolling a good deal himself, but did not get any trout. Bass fishing was fairly good, and considerably better than last season.

Ducks are scarce in his division, one reason being he believes that there is no feed for them. Geese are much more plentiful than usual.

Overseer Robert Tillett, of Roche's Point, reports that as far as he is aware, there have not been any violations of the law. He has been told that some of the tourists were catching small bass, but he could not get the names of the parties. He examined different boats, but did not find any fish under size. He says the public do not seem to give an overseer any help; they tell things that happen, but will not give any names. The bass fishing was not good this season in his district. There do not appear to be many maskinonge, as very few were caught this season. He thinks there should be something done to increase the supply of bass and maskinonge. He did not hear of one pickerel having been caught this season. There seem to be plenty of whitefish and trout. He would like to see the close season for these fish commence on the 15th October.

There are more ducks this season than last, but very few fur-bearing animals, and very few partridges, as there is not much timber for them.

The law in his division has been very well observed on the whole.

Overseer Michael Timlin, of Atherley, reports that the fishing has been good this season in Lakes Couchiching and St. John, maskinonge, black bass, herring and pickerel being plentiful in those waters.

The law has been very well observed in his division in the different close seasons, as no violations came to his knowledge.

There are three mills in his district, one being the Chemical Mills at Longford, but the law regarding mill refuse in the waters was well observed.

As to Game Laws, one infraction of the law came to his notice—a man illegally shooting a moose in close season. He imposed a fine, which he paid. He did not live in his district.

Ducks, partridges and muskrats are quite numerous.

Nipissing.

Overseer G. L. Bailey, of Callander, reports that the fishing has been fully equal to other seasons. The bass are becoming more numerous, and there is no difficulty in obtaining a good catch. Pickerel and pike are always obtainable without any trouble. There are no speckled trout streams running into the lake, although there are some about twenty miles inland, and the fishing there has been good, he having seen some weighing from one to three pounds. The law in regard to fishing has been well observed, and no pollution has been dumped into the waters. The tourists are numerous, and the islands are thickly populated with both Canadians and Americans.

The hunting season for deer in 1909, was well observed, and all the hunters were satisfied, the majority receiving their allotted number. The close season for partridge was also observed, and they promised to be exceptionally plentiful for 1910, the fire-rangers having seen numerous flocks during the summer. Ducks were plentiful, especially in the later part of September last year; this year they were later coming round those parts. The snipe afforded great shooting on the marshes.

Overseer James Dunlop, of Mackey's Station, reports that since his last report he finds very little change in the game and fish situation. Deer are not so plentiful this fall as it appears to him now, but as the season is not open, it is difficult to report just how they are going to turn out. During the earlier part of summer they seemed quite plentiful, but of late have disappeared. Partridge were numerous this fall, but are being slaughtered wholesale. In his opinion there should be a limit to a day's shoot, and also a small fee charged in order to protect them annually during open season. The farmers in his district try to protect the birds on their property, and some outsider comes along and cleans out the whole flock in a day's shoot.

Rat and mink are very scarce, in fact, rat are almost extinct and should be protected. Beaver are very plentiful, in fact, the country is full of beaver.

Duck are not so numerous as formerly.

As a rule, he has little trouble in protecting game, except for Indians. They do not seem to be able to understand the laws. He had to fine one fellow, but is getting them educated by being lenient with them.

Overseer Philippe Pilon, of Sudbury, reports that he was advised of nets being set in Lake Ramsey, but after visiting the lake twice during the summer, he found no nets. He has not received any applications for licenses for fishing, and no fees have been collected.

He visited the different townships, Capreol to Dill inclusive, every month, and did not find anything contrary to the rules and regulations, with the exception of a hound being loose in the township of Broder. After notifying the owner of said hound, it was taken back and looked after.

Biological Department,
University of Toronto,
December 9th, 1910.

E. Tinsley, Esq.,

Superintendent of Game and Fisheries, Toronto.

Dear Sir,—I beg to report on the work of the Biological Station, Georgian Bay, as follows:

During the past season the station was open for workers from June 1st to September 10th. Mr. A. R. Cooper, B. A., continued his previous work on the life history of parasites affecting fresh water fishes. Mr. A. D. Robertson took charge of the collection of mollusks, the latter being collected systematically for the first time. Dr. A. G. Huntsman supervised this work during the month of August and the collection is now being worked over by Mr. Robertson as a post-graduate student. Mr. E. M. Coatsworth made collections of flat-worms and leeches and worked out a provisional classification embracing both parasitic and free living forms. The work on the species of fish and their distribution was continued, and the thanks of the staff are due to the Department for permission to use certain nets for this purpose.

Yours respectfully,
B. A. Bensley,
Assistant Director.

REPORT OF THE WORK DONE AT THE BRANTFORD BASS POND DURING THE SEASON OF 1910.

To the Superintendent, Game and Fisheries Department, Parliament Buildings, Toronto, Ontario.

Sir,—I herewith beg to submit my second annual report in connection with work done, and the result thereof, at the Provincial Experimental Pond here.

The Bass fingerlings number over fifty thousand, which were transplanted by myself in different inland waters. The mortality through transit was not noticeable.

On April 22nd, 83 parent fish, 35 male and 48 female, were deposited in the pond, with the result that on the 17th May, they began in several instances to build their nests. The weather this year was not nearly as favorable as last, owing to the continued low temperature.

Some sixteen nests were built and hatched, twelve of which were in sheltered nests, and four on the natural gravel beds. The dimensions of the ponds are 155 feet by 135 feet, total area 580 feet of hatching space, and this being divided into 20 feet, gave us the sixteen nests, which was the only available place in which nests could be successfully built and hatched. The total hatched and reared from those sixteen nests averaged a trifle over three thousand per nest.

The Department are to be congratulated upon the success this year, and the activity they have displayed in connection with the establishing of the new hatchery at Mount Pleasant.

Yours truly,
J. T. Edwards.

REPORT OF THE WORK PERFORMED BY THE PATROL BOAT "EDNA IVAN," ON THE GREAT LAKES, DURING THE YEAR 1910.

Owen Sound, December 9th, 1910.

E. TINSLEY, ESQ.,

Superintendent of Game and Fisheries, Toronto.

Sir,—I have the honor to forward herewith my second annual report of the work performed by the chartered patrol boat "Edna Ivan."

On the 26th April, I took charge with Mr. W. W. Holden on board and commenced the patrol of the Great Lakes, but on account of fog, only made from Gore Bay to Little Current where I took on board the gasoline launch and other property belonging to the Department; 27th continued the patrol of a portion of the Georgian Bay as far as Owen Sound; 30th left for Lake Erie, calling at Tobermory, Kincardine and Sarnia, arriving at Walkerville on the 3rd of May; 4th, 5th and 6th lying in Walkerville painting ship, and having new gangway made to replace one lost in gale on Lake Huron; 7th left with Mr. Holden and Mr. V. Chauvin on board for Lake Erie, calling at Amherstburg for coal and on to Kingsville; 8th, left and ran to Rondeau; 9th, went with W. W. Holden, V. Chauvin and J. McVittie over Rondeau Bay and to Bates fishing station, where learned of a catch by them of 57,600 lbs. of German carp at one haul of a seine; 10th, ran to Port Stanley, where Mr. Chauvin left; 11th, cruised down the Lake, calling at Port Burwell and on to Port Dover, where Mr. Holden left and Dr. Burt came on board; 12th, left and continued cruise to Port Maitland. Dr. Burt went up the river to Dunnville; receiving instructions to return to Walkerville, returned to Port Dover; 13th, Dr. Burt left, and at 6 a.m. left, 2.30 p.m. arrived at Port Stanley where coaled ship; 14th, 5.40 a.m. departed and at 9.40 p.m. arrived at Walkerville, but, owing to the indisposition of the Minister, the contemplated cruise by him had to abandoned; 17th, left Walkerville with W. W. Holden, V. Chauvin and officer Drouillard on board. Mr. Chauvin, Mr. Drouillard and the Mate went along the shore of Lake St. Clair to inspect the pound nets, the steamer keeping outside, and was met by the launch at the mouth of the Thames. Mr. Chauvin and Mr. Drouillard left by rail; 18th, 19th and 20th, cruised up St. Clair River and Lake Huron as far as Goderich; 21st, continued cruise to Kincardine and Southampton; 25th, left, calling at Tobermory, Rattlesnake, South Bay Mouth and the Duck Island; 27th, called at Cockburn Island and Meldrum Bay and on to Gore Bay. From the 30th until June 4th patrolled the Georgian Bay by the North Shore to Owen Sound, Mr. Holden having left at Penetang; 6th, left for Wiarton, where officer J. W. Jermyn joined the ship, going as far as Tobermory; 7th, called at Lion's Head and Wingfield Basin, continued on to Rattlesnake and Little Current; 8th, on to Kagawong and Gore Bay; 9th, left for Sault Ste. Marie, calling at Blind River; 11th, officer Calbeck on board, went as far as Batchawana, Lake Superior, cruised with launch along the shore of Parisian Island and back to the Soo on the 12th; 13th, with Warden J. T. Robinson on board, proceeded up Lake Superior, stopping at Point Aux Pins, Gargantua, Michipicoten Harbor and Michipicoten Island, returning to Sault Ste. Marie on the 16th; 17th and 18th, cruised down the St. Mary River and the North Channel to Gore Bay, calling at Hilton, Thessalon, Cockburn Island and Gore Bay; 21st and 22nd, and 23rd, patrolled the waters from Gore Bay to Penetang, calling at Duck Island, South Bay Mouth, Rattlesnake Harbor, Little Current, Killarney; 24th, at Collingwood for inspection; 25th, left for Thornbury where officer Thos.

McKenney came on board; off Cape Commodore found evidence of hook fishing, but failed to find any hooks; 27th, Mr. W. W. Holden rejoined the ship; 28th, at Wiarton, where J. W. Jermyn came on board, and left for Lion's Head; 29th, in Barrow Bay, where got a short line of hooks, thence to Tobermory; 30th, cruised to Southampton and Kincardine; July 1st, left for and arrived at Goderich; 2nd, continued cruise of Lake Huron and River St. Clair, Lake St. Clair to Walkerville, calling at Sarnia; 5th, handed over seized seine nets to Mr. V. Chauvin and departed up the river with him on board to Sarnia; 6th, W. W. Holden and V. Chauvin went to Point Edward with reference to some dispute between fishermen, at midnight, Mr. Holden left the ship; 7th, 8th, 9th and 10th, cruised from Sarnia to Manitowaning, calling at Goderich, Kincardine, Southampton (where Mr. Holden rejoined the ship), and Rattlesnake Harbor; 11th, I drove with Mr. Holden to Lake Manitou in the morning and again in the afternoon to investigate the affairs of the Manitou Fish Co., and found they have a very complete fish hatchery, but fear the result will not be satisfactory. In the evening left for Gore Bay; 14th, 15th and 16th, patrolled the waters of the North Channel, Lake Huron and Georgian Bay to Owen Sound, calling at Duck Island, South Bay Mouth, Tobermory, and Wiarton. At Owen Sound Mr. Holden left; 18th, went to Meaford to meet officer McKenney (but didn't meet him); 19th, cruised to Thornbury, found McKenney was away from home, and continued on to Collingwood and Penetang; 21st, left for Parry Sound, where Mr. Holden came on board; 22nd and 23rd, patrolled from Parry Sound to Gore Bay, calling at Point Au Baril, Byng Inlet, Bustard Islands, Killarney and Little Current; 26th and 27th, patrolled from Gore Bay to Sault Ste. Marie, calling at Cutler (where Capt. Hunter came on board), Blind River, Bruce Mines, Hilton and a dock in St. Mary's River, Richards Landing and arrived at the Soo on the 27th; 29th, left at 5.40 p.m., got through the Lock and to Point Aux Pins; 30th and 31st, patrolled the waters of Lake Superior, calling at Batchawana and Gargantua. From August 1st until 6th, patrolled the waters from Gargantua to Port Arthur, called at Michipicoten Harbor, Otter Cove, Port Coldwell, Ross Port, Nepigon and Eagle's Nest, arriving at Port Arthur on the 6th; from the 8th, until the 12th, left on return trip, calling at most of the ports visited on the up trip, and at Nepigon Strait, Michipicoten Island, Jack Fish, Little Pick, Goulais Bay and arrived at Sault Ste. Marie; on the 12th and 13th, cruised down the river and North Channel to Thessalon; 14th, continued on to Gore Bay; 16th, left, patrolled to Meldrum Bay, thence to Cockburn Island, Duck Island, South Bay Mouth, and Rattlesnake Harbor and arrived at Tobermory on the 18th; 19th, proceeded to Wiarton, where J. W. Jermyn came on board, thence to Owen Sound; 20th, Mr. Holden left for Toronto, and I left for Cape Commodore and Griffith Island, where Mr. Jermyn and I searched for hook fishing, but didn't find any, thence to Wiarton, where Mr. Jermyn left and returned to Owen Sound; 22nd, left for Thornbury to interview Mr. McKenney, but found he was still away from home, then proceeded to Penetang, then to Parry Sound, Point Au Baril, Byng Inlet, Bustard Islands, Killarney, Little Current, Kagawong and on the 27th arrived at Gore Bay; 29th took the "Vega" in tow; called at Little Current and Killarney; 31st, "Vega" still in tow, but cast off her line off Point Au Baril and arrived at Penetang 8.35 p.m. September 1st went to Giant's Tomb where anchored and went in launch to Whalen's Landing. Found Officer McKenney had left for home, proceeded to Christian Island for night; 2nd departed direct for Thornbury, where had interview with Mr. McKenney and on to Wiarton and was joined by J. W. Jermyn; 3rd left for Tobermory; 5th left at 8.25 a.m. saw three sail boats about

five miles off Johnson's Harbor, ran to them and lay by one of them for two hours while they lifted their nets. I found that McGaw was fishing for a party who had a license to fish in that locality, so proceeded to Southampton, where I found I had interviewed the wrong man; 7th, returned to Johnson's Harbor, accompanied by Officers Jermyn and Robertson, and seized a gasoline boat and nets, which I towed the next day to Southampton and left in charge of Mr. Robertson; 10th left and ran to Rattlesnake Harbor, thence to Little Current and Gore Bay; 13th left, calling at Little Current, Tobermory, Southampton and Kincardine and arrived at Goderich on the 15th; 16th left with Mr. W. W. Holden on board, ran to Sarnia where Mr. Holden was engaged balance of day; 17th patrolled down the river to Walkerville; 20th and 21st patrolled Lake St. Clair with W. W. Holden and V. Chauvin on board; 22nd and 23rd cruised among the Canadian Islands of Lake Erie to Kingsville, and returned to Walkerville; from 26th until 28th patrolled the waters of Lake Erie to Port Stanley, calling at Kingsville and Rondeau. Mr. Chauvin left the ship at Port Stanley; 29th, 30th and 31st called at Port Burwell and Port Dover; October 2nd left and ran to Port Colborne where Mr. Holden left; 3rd returned up the Lake calling at Port Maitland and Port Dover; 4th was storm-bound and anchored under Long Point; 5th, 6th, 7th and 8th cruised up the Lake calling at all ports where many matters were attended to and arrived at Walkerville on the above date; 10th left with Mr. Holden and Mr. V. Chauvin on board and patrolled up Lake St. Clair and River to Sarnia; 11th cruised along the shore as far as Blue Point to examine the pound nets, thence to Goderich, where Mr. Holden and Mr. Chauvin left. From 12th to 15th patrolled from Goderich to Gore Bay, calling at Kincardine, Southampton, Tobermory, Rattlesnake Harbor, South Bay Mouth, Duck Island and Meldrum Bay; 19th left Gore Bay, called at Cockburn Island, Hilton and arrived at the Soo on the 20th, where lay for three days storm-bound; 24th passed through the Soo Lock and proceeded up the River and Lake (Superior), met gale, ran for Goulais Bay for shelter; 25th on account of fog and wind only made to Batchawana; 26th ran to Mamaise Point but found that the reported illegal fishing there was not true, so returned to the Soo; 27th left and cruised down the River and the North Channel to Thessalon and Blind River; 28th after interviewing Officer Bradbury, left for Gore Bay; 31st continued cruise to Little Current and Killarney; November 1st left, but on account of wind and sea had to return and lay in that and the following day; 3rd and 4th patrolled the North Shore of the Georgian Bay calling at all ports to Penetang; 5th, Mr. Holden joined the ship and we ran to Collingwood; 6th, snow-storm all day; 7th, ran to Owen Sound calling at Meaford; 9th, departed, but had to run for shelter under White Cloud Island; 10th to 13th, continued stormy; 14th, reached Tobermory; 15th ran to South Bay Mouth and Rattlesnake Harbor; 16th patrolled to Killarney and Little Current. When three or four miles out of Killarney saw two pound nets, ran to them and concluded to return next day; 17th left with D. Irwin on board and found that one of them was fishing, ran into Killarney and saw the owner who accompanied us back to the nets; the fish were liberated by Mr. Holden; 18th left for Gore Bay, calling at Kagawong; 21st and 22nd having heard of illegal fishing at Fitzwilliams Island went there to investigate; Mr. Holden and D. Irwin went one way and I the other, around the Island, but did not find any indications of fishing; 24th left Rattlesnake Harbor and ran to Club Island, thence to Killarney and Little Current and arrived at Gore Bay on the 25th. From that date until the end of the month continuous storms prevailed. On the 30th handed over the ship to the owner.

Fishing the past season was generally light but some large catches were made in Lake Erie and at Killarney, Georgian Bay. In fact the fishing was good off Killarney, Squaw Island and the Duck Islands. The storms of November protected the fish better than many boats could, and commercial fishermen (as a rule) observe the law well.

During the season the ship has been at seventy-four ports and logged 9,904 miles.

REPORT OF THE WORK PERFORMED BY THE PATROL BOAT "ELLA C" ON THE RIDEAU WATERS DURING THE YEAR 1910.

On Monday, the 16th May, 1910, left Smith's Falls for Kingston to bring down the "Ella C." Left Kingston next morning at 5, and patrolled down as far as Jones' Falls, stopping there for dinner. In the afternoon patrolled down to the Big Rideau and stopped at Garrett's Rest for the night. Blowing a gale on Wednesday, and the lake very rough. Left Garrett's Rest at 2 p.m., patrolled to Oliver's Ferry and thence to Smith's Falls, arriving there are 6.30 p.m. On Thursday patrolled the south shore from Smith's Falls to Portland and then to Oak Island, where we stopped for the night. Steamed up at 7 a.m., on Friday, patrolled from Oak Island to Newboro, stopped for a while and then patrolled the Little Rideau and on down to Noble's Bay for the night. Saturday steamed up at 7 a.m., patrolled the Lower Rideau as far as the Tay Canal and then over to McDonald's Bay, and on to Smith's Falls, remaining in port there over Sunday.

Left at 8 a.m., Monday, patrolled the south shore up to Rideau Ferry and on to McLean's Bay, and to Gem Island for the night. On Tuesday left at 7 a.m., for Portland, patrolling German Bay and around Long Island, and back to Adam's Lake for the night. Started at 6 a.m. on Wednesday, patrolled to Westport, called to see Overseer Clark, and back down to Smith's Falls for coal, arriving at 7.30 p.m. Took on coal next day, and patrolled the Lower Rideau to McVeety's Bay, and, on to Noble's Bay, and back to Gem Island for the night. On Friday patrolled the north shore to Trout Island, called at Angler's Inn, and on to Portland and Garrett's Rest, and back to Rideau Ferry for the night. Left again next morning at 7, patrolling down to Smith's Falls to fit on flag poles and clean up boat. In port at Smith's Falls over Sunday.

On Monday patrolled the south shore up to Garrett's Rest, and stopped for the night. Next day patrolled to Portland, stopped for a while and then went over the salmon and bass grounds, back to Adam's Lake for the night. Patrolled the north shore to Trout Island and Turnip Island on Wednesday, stopped at the Angler's Inn, and thence to Oak Island. Left again next morning at 7.30 and patrolled German, Horseshoe and Bass Bays, and then on down to Gem Island. Next day patrolled the north shore to Trout Island around Grindstone Island and to Portland and down the south shore to Rideau Ferry for the night. On Saturday patrolled the Lower Rideau to Tay lock, on down to Stonehouse Point, and thence to Smith's Falls. The rest of the day was spent in cleaning up the boat. Remained in port at Smith's Falls over Sunday.

On Monday, June 6th, steamed up at 7 a.m., patrolled to the Tay Canal, and on to the Ferry, stopping there for a while, then on to McVeety's Bay, and to Gem Island for the night. Left again next morning at 6, patrolling the salmon grounds to the Narrow Locks, then on to Newboro and back to Big Rideau. On Wednesday

patrolled the south shore to Portland, and over to Trout Island and on down the north shore to Smith's Falls, where we arrived at 8 p.m. Next day patrolled down the Rideau to Kilmarnock, took row boat and patrolled the break ground at night. On Friday steamed up at 7 a.m., patrolling back to Mill's Locks, and up to Smith's Falls for the night; left there at 8 a.m. next day, patrolled the north shore to McLean's Bay and on to the Narrows and back down the south shore to Smith's Falls. In port at Smith's Falls over Sunday.

Left on Monday at 7 a.m. for the Rideau Ferry, and on to Gem Island, where we had to tie up as it was blowing a gale on the lake. Left on Tuesday morning at 6.30, patrolling the north shore to Portland, calling at Garrett's Rest and the Angler's Inn. Stopped at Gould's Wharf for the night. Next day patrolled McLean's Bay and McVeety's Bay, on to the Tay Canal, and over to McDonald's Bay, and up the north shore to Rideau Ferry for the night. Left at 7.30 next morning, patrolled the south shore to Portland and on over to the north shore, patrolled Horseshoe and Bass Bays, and then on to Noble's Bay. On Friday left at 6 a.m., patrolling the north shore to Newboro, and back to the Big Rideau, patrolling the bass grounds and on to Oak Island for the night. Went to Smith's Falls on Saturday, arriving at 2 p.m. Spent the rest of the day cleaning up the boat. Remained there over Sunday.

On Monday June 20th went up to Rideau Ferry and on to Portland, then back to Poonahmalee, arriving at 12 p.m. Took rowboat and patrolled till morning watching the frog catchers. Next day patrolled from Poonahmalee to Smith's Falls, cleaning up the boat the rest of the day. Steamed up at 6 next morning. Left Smith's Falls with Mr. Cox on board, and patrolled down the Rideau to Merrickville, returning to Smith's Falls for the night. Next day patrolled from Smith's Falls to Portland, calling at all the club houses, and stopped at Garrett's Rest for the night. Patrolled from Smith's Falls on Thursday to Portland, calling at all club houses, and stopped at Garrett's Rest till morning, when we patrolled around Long Island and Trout Island, over to the north shore, and down to Gem Island. Next day went down to Rideau Ferry and down the south shore to McDonald's Bay, then over to the Tay Canal, and thence to Smith's Falls. The rest of the day was spent in cleaning the boat. Remained at Smith's Falls until Monday, when we patrolled the south shore to Portland. Found no complaints of illegal fishing. Went back the north shore to Gem Island, and next day to the Narrows Locks and back to the Anglers' Inn, and on to Gem Island for the night. On Wednesday patrolled the south shore to Smith's Falls, stopped for dinner, and then back to Gem Island. On Thursday left at 7 a.m., going along the north shore to Portland, and down to Rideau Ferry. Next day patrolled the north shore to Trout Island around Long Island, and then down to Smith's Falls. Patrolled up to McDonald's Bay and on to Rideau Ferry on Saturday, then to McVeety's Bay and to Gem Island, where we remained till Monday.

On Monday the 4th July patrolled the south shore to Portland, then over to the north shore and on down to Gem Island. Tuesday, went to Rideau Ferry and on to Perth, and back to Big Rideau. Next day patrolled the north shore to Trout Island and over to Portland, stopped for a while, and ran down to Smith's Falls to put in new cable for steering gear. Spent Thursday fixing steering gear, tightening wheel and fixing rudder. Ran back to Gem Island for the night. Steamed up at 7 a.m., on Friday, patrolled the south shore to Garrett's Rest and on to Portland over to the Bungalow and Anglers' Inn, and back the north shore to Murphy's Bay. On Saturday went down the south shore to McDonald's Bay and on down to

Smith's Falls, arrived at 2 p.m., and spent the rest of the day cleaning up the boat. Remained there over Sunday.

On Monday the 11th steamed up at 7 a.m., went up to Rideau Ferry, stopped for dinner, ran to Portland, on to the Bungalow and Anglers' Inn, and stopped at Garrett's Rest till next morning, when we patrolled the shore up to Newboro, then to the Upper Rideau and back the north shore to Glen Island. On Wednesday patrolled the south shore to Smith's Falls, took on coal, and back to Big Rideau for the night. Next day went to Portland and around Grindstone Island and Trout Island, and back the north shore to Gem Island. Patrolled Adams Lake and Noble's Bay on Friday with the rowboat, and on Saturday went to McVeety's Bay, on to Rideau Ferry, and down the south shore to Smith's Falls, arriving at 12 noon. Cleaning up the boat the rest of the day. In port at Smith's Falls over Sunday.

Left on Monday at 7 a.m. for Stonehouse Point, on to Tay Canal and to Rideau Ferry, then on to Gem Island. Next day went to Portland calling at Garrett's Rest, over to the north shore, and back down to Gem Island. On Wednesday went to Rideau Ferry and Smith's Falls, taking on coal, and back to Rideau Ferry for the night. Patrolled the south shore to Portland next day, calling at the club houses, ran over to the north shore and back down to the Narrows, remaining over the next day, as it was blowing a gale and could not take the steamer out. On Saturday patrolled the north shore up to Westport, and back to Portland, calling at all the club houses. In port at Gem Island over Sunday.

Patrolled the south shore on Monday to Rideau Ferry and on to Smith's Falls, took on coal and patrolled back the north shore to Gem Island. On Tuesday started at 6 a.m. for the south shore to Portland, ran over to the Bungalow and Garrett's Rest, and then down to Rideau Ferry. Next day patrolled up the Tay Canal to Perth, and back to Big Rideau for the night. Started again at 6 a.m. and patrolled the north shore up to Newboro, called to see Inspector White and ran back to the Narrows for the night. On Friday patrolled the south shore to Portland, calling at all the club houses, and back down the north shore to Gem Island. Steamed up at 6 a.m. on Saturday, patrolling down to Rideau Ferry and McDonald's Bay and on to Smith's Falls, taking on coal, and then back to Gem Island remaining there over Sunday.

On Monday the 1st August, steamed up at 7 a.m. and patrolled the south shore down to McDonald's Bay, over to Stonehouse Point, back the north shore to McVeety's Bay, and on to Gem Island, leaving there the next day for Garrett's Rest and Portland, over to the Bungalow, and on down the north shore to Noble's Bay. Left again at 6 a.m. next day for Smith's Falls, took on coal, and went back to Rideau Ferry and on to the Big Rideau, and on Thursday patrolled down to the Ferry and back to the Narrows. Tied up in Murphy's Bay, as a gale was blowing. Left on Friday for Garrett's Rest and Portland, over to the Bungalow, and on down the north shore to Gem Island. On Saturday patrolled down to Rideau Ferry and on to Smith's Falls, took on coal, and patrolled back to the Big Rideau. In port at Gem Island over Sunday.

Patrolled the north shore to Newboro on Monday, stopped for a while, and patrolled the Upper Rideau and on down to Garrett's Rest for the night. On Tuesday went to Portland and down the south shore to the Narrows. Took Hon. Dr. Reaume and Capt. Hunter on board and patrolled back to the Anglers' Inn and down to Gem Island. On Wednesday patrolled down to Rideau Ferry and McDonald's Bay and on down to Smith's Falls. Took on coal, and patrolled back to the Big Rideau. Steamed up at 6 a.m. next day, patrolled the south shore to

The "Naiad."

Portland, calling at all the club-houses, and back the north shore to Noble's Bay. Patrolled McVeety's Bay on Friday and on to Smith's Falls to sell permits, and back to Gem Island for the night. On Saturday patrolled up to the Bungalow and Garrett's Rest and on to Portland, back down the north shore to Adams Lake. Remained in port at Gem Island over Sunday.

On Monday went to Portland, calling at all the clubhouses and along the north shore to Smith's Falls. Took on coal and stopped for the night. Left at 8 a.m. on Tuesday for Stonehouse Point, on to the Tay Canal and to Rideau Ferry. Patrolled McDonald's and McVeety's Bays, and on to Gem Island. Next day patrolled the south shore to Portland, on over to the north shore, and on down to Noble's Bay and Rideau Ferry, and back to Gem Island. Blowing a gale next day, so did not take steamer out, but patrolled Adams Lake and Noble's Bay with rowboat. Started at 6 a.m. Friday along the south shore to Garrett's Rest and on to Portland, and back down the north shore to Smith's Falls, remaining there till Monday. Put glass in windows and cleaned out boiler and boat on Saturday.

Steamed up at 7 a.m. on Monday, patrolling the south shore to Portland, on over to the north shore, calling at the Bungalow and Anglers' Inn, down to Murphy's Bay. Next day went to McVeety's Bay and McLean's Bay, down to Rideau Ferry, back the south shore, patrolling Noble's Bay down to Gem Island. On Wednesday patrolled down to Tay Canal and on to Perth, stopped for dinner and patrolled back to Big Rideau. Steamed up at 6 a.m. on Thursday, patrolled the north shore to Westport and the Upper Rideau, and back the south shore to Gem Island. Next day went to Rideau Ferry and McDonald's Bay and on to Smith's Falls. Took on coal and patrolled back to Rideau Ferry for the night. On Saturday patrolled up to McVeety's Bay and McLean's Bay and on to Gem Island. Cleaned up boat and painted smokestack. In port at Gem Island over Sunday.

On Monday patrolled the north shore to Horseshoe Bay and on to Portland, back the south shore to Garrett's Rest and on down to Murphy's Bay for the night. Patrolled down to Rideau Ferry on Tuesday and to McLean's and McVeety's Bay, back up to Noble's Bay, and on to Garrett's Rest. Next day patrolled the north shore up to Trout Island and Grindstone Island, on to Portland and back the south shore to Noble's Bay. On Thursday got a complaint that one M. H. Smith was shooting on duck ground. Drove to Perth, got summons, and served the parties. Patrolled to Perth next day to attend court, then back to Rideau Ferry and on to Gem Island for the night. Left the island on Saturday at 4 a.m., patrolled to McLean's Bay to watch the duck ground, took steamer and patrolled to Smith's Falls, remaining in port there over Sunday.

Steamed up at 7 a.m. on Monday, September 4th, patrolled down to Hutton's Locks, on to Kilmarnock, took rowboat and patrolled the break ground, watching the ducks. Found no one shooting. On Tuesday patrolled Davis' Creek and Johnson's Bay, and on to Irish Creek. Patrolled back to Kilmarnock, and left the next day for Merrickville, called to see Inspector Boyd, and ran back to Kilmarnock. Went to Smith's Falls on Thursday, then to Rideau Ferry, and on to Gem Island. Patrolled the Rideau waters on Friday up to Newboro, then to Chaffey's Locks, and on to Jones' Falls. Left at 7 next morning for Brewers Mills, and on to Kingston, arriving at 2.30 p.m. Took on coal and stopped there over night. On Sunday patrolled with Capt. Fleming with launch between Kingston and Kingston Mills. Mr. McGuire and Mr. Best patrolled the marsh with rowboats. On Monday went to Brewers Mills and up to Jones Falls, and to Newboro for the night. Found no one shooting. Left Newboro at 8 a.m. next day, went down to

the Narrows Locks, on to the Bungalow, and then to Portland, calling at Garrett's Rest. Stopped at Gould's Wharf for the night, and left next morning at 7 for Rideau Ferry, and on to Smith's Falls. Patrolled back the north shore to Tay Locks, and on to Gem Island for the night. On Thursday patrolled McLean's and McVeety's Bays and Adams Lake with rowboat, watching duck grounds to see that no non-residents were shooting. Steamed up at 8 a.m. on Friday, and patrolled the north shore to Trout Island and on over to Portland, and back down the north shore to Gem Island. On Saturday went down the north shore to Rideau Ferry and McDonald's Bay, on to Poonahmalee and Smith's Falls. The rest of the day was spent in putting in new ropes and fenders. Remained at Smith's Falls over Sunday. Left on Monday at 8 a.m. for Stonehouse Point and on to the Tay Locks and on up the Tay Canal to Perth for the night. On Tuesday left Perth at 8 a.m. for Rideau Ferry, then to McLean's Bay and McVeety's Bay, and patrolled Noble's Bay. Stopped at Murphy's Bay for the night. Steamed up at 7 a.m. on Wednesday, patrolled the north shore up to Trout Island, ran over to Portland, and back the north shore to Gem Island. Next day patrolled the south shore to Rideau Ferry and McDonald's Bay and on to Smith's Falls, took on coal, and back to the Big Rideau. On Friday started at 6 a.m. to the Narrows Locks and on to Newboro, and back down to Oak Island for the night. On Saturday patrolled the south shore to McVeety's Bay and McLean's Bay and down to Stonehouse Point, and on to Smith's Falls. Cleaning up boat the rest of the day. In port at Smith's Falls over Sunday.

On Monday, Sept. 26th, patrolled up to Rideau Ferry and on to McLean's Bay and McVeety's Bay, on to Noble's Bay, and back to Gem Island. Storming hard and blowing a gale on Tuesday, so could not take the steamer out. Cleaned the boat. Next day left for Christie's Lake, and patrolled all night with Overseer Burke. Patrolled Christie's Lake on Thursday, and grappled all day for nets, but did not find any. Left for home after night, arriving at 1 a.m. Next day patrolled the north shore to Trout Island, and on over to Portland, and back down the south shore to Murphy's Bay. On Saturday patrolled the south shore down to Rideau Ferry, on to McDonald's Bay and to Smith's Falls, arriving at 1 p.m. Cleaning up boat rest of day. In port at Smith's Falls over Sunday.

Monday, 3rd October, steamed up at 7 a.m., patrolled the Rideau up to Newboro, and on to Jones Falls. Left next morning for Washburn Locks. Lost the wheel belonging to the "Ella C.," ran on to Kingston with launch and remained over night. Next day left Kingston at 9 a.m. Came down with steamer "Navarch" and Capt. Fleming, and towed the "Ella C." to Kingston. Came to Jones Falls with Inspector McGuire. On Thursday patrolled with launch from Jones Falls to Portland, and on down to Smith's Falls. Logged, 2,427 miles.

REPORT OF THE WORK PERFORMED BY THE PATROL BOAT "NAIAD" ON LAKE SIMCOE AND KAWARTHA LAKES DURING THE YEAR 1910.

On Monday, April 18th, we started from Lock Six, Trent Canal, at 7 a.m. Went to Peterboro' Wharf, took on coal and proceeded down the Otonabee River, dragged for nets at Robinson's Island, and met Inspector Johnston, but found nothing; also dragged Hall's Creek, and Tupper's Creek, and ran to Bensfort Bridge, laid there over night, and after dark watched for jack light in Devil's and

Bensfort Creeks, but there was nothing doing. On Tuesday, April 19th, we left Bensfort Bridge at 7 a.m. Dragged creek at Campbelltown; also Kent's Creek and Steamboat Creek, from there to mouth of Otonabee River, thence to Harwood and Idylwyld; from there to Keene and Ooge River at the mouth of Trent River.

On Wednesday, April 20th, we patrolled the River Ooge with rowboat from 7 a.m. until 10 a.m., then patrolled the River Trent from the Ooge to Hastings, and took on a half ton of coal. Left Hastings and ran to McNaughton's Island, and laid over night, but took the small boat at 7.30 p.m. and patrolled the lake until 10.30 p.m. There was no jack lighting on Rice Lake. On Thursday, April 21st, left McNaughton's Island at 7 a.m. and ran to Rama Point; then took rowboat and rowed to Roach's Point; thence to Plumb Point, and found two yellow bass had been cleaned there. In conversation with a farmer, I was informed that James and Maden Howard were using the cottage for trapping, so we stayed around until they came back at 11.30 a.m., and they gave permission to search their cottage, and in doing so found a net about seventy-five feet long, and quite wet; also found some cooked bass, that had been cooked quite recently. We then went to the steamer at Rama Point, and patrolled the waters from Rama Point to Gore's Landing, thence to Bewdley and back to Jubilee Point. Saw Inspectors McAllister and Kent.

On Friday, April 22nd, cleaned steamer and left Jubilee Point at 9 a.m. Patrolled part of Rice Lake and Otonabee River to Steamboat Creek, dragged creek thoroughly, and then ran to Kent's Creek, and patrolled it with drag. Saw a quantity of maskinonge and bass; left there and came to Devil's Creek and Riddle's Bay, dragged there thoroughly, but found nothing, and then came to Hall's Bridge. At 6 p.m. started to row, and went up Creek, and found one small net about seventy-five feet long. Patrolled the creek until 10 p.m., and returned to steamer for the night. On Saturday, April 23rd, we left Hall's Bridge at 7 a.m., came to Goodfellows' Creek, and patrolled there; thence to Robinson's Island, but found nothing, and came to Street Railway Wharf at Peterboro', and cleaned steamer, and took in coal and provisions for the following week. On Sunday, April 24th, laid at Peterboro; it rained all day. On Monday, April 25th, patrolled the waters from Peterboro to Lakefield, and found quite a quantity of sawdust floating on the river about one mile below Lakefield. I think it was from the Cavendish Lumber Co. mill. Notified them to be more careful, then took on Inspector Moore at Lakefield, and came to Young's Point, and thence to Moore's Cottage, Stoney Lake. Chapper and Moore rowed for two hours, from 8 p.m. to 10 p.m.

On Tuesday, April 26th, patrolled from Moore's cottage to Crow's Landing; rowed from there to the head of Stoney Lake, and back to Crow's; then patrolled to Breeze Cottage; then rowed to Whitelake, and back to Breeze; patrolled with steamer to Moore's cottage; thence to Burleigh Falls and Lovesick. Laid there over night. On Wednesday, April 27th, patrolled from Lovesick to Deer Bay; rowed all around Deer Bay; then by steamer to Buckhorn, and from there to Sandy Creek. Rowed up Sandy Creek to the head of Creek Hunter, and back by steamer; thence by steamer to Herrington's Island, arriving there at 6.30 p.m. Started at 8 p.m. and rowed till 9 p.m. The reason for rowing from 8 till 9 p.m., thought we saw jack lights, but on investigation found them to be lights from farm houses.

On Thursday, April 28th, patrolled from Chemong Village to Bobcaygeon, and from there to Lindsay. Remained at Lindsay over night, and took rowboat at 7.30 p.m. and patrolled the Lindsay River to Sturgeon Lake, and back to Lindsay, arriving there at 11 p.m. On Friday, April 29th, patrolled the waters from Lind-

say to Fenelon Falls, around Sturgeon Lake, and back to Lindsay. Wind too heavy to stay on Sturgeon Lake. On Saturday, April 20th, patrolled the waters from Lindsay to Bobcaygeon, and from there to Chemong Park; then paddled with Inspector Peter Nicholls from Chemong Park to Fowler's Corners, and back to Fife's Landing; then walked home to Peterboro. On Sunday, May 1st, laid at Chemong Park. On Sunday, May 2nd, patrolled the waters around Chemong Park up to Herron's Island; then by rowboat to Fowler's Corners, and on the way up found a night line six hundred feet long; think it belongs to the Herron family; then took steamer and ran to Findlay Bay, and got three mud spears on James Findlay's boathouse; then came back to Chemong Park, and patrolled to Chemong Village, and laid there over night on account of heavy wind and rain.

On Tuesday, May 3rd, patrolled the waters from Chemong Village to Gannon's Narrows; from there to Bobcaygeon, thence to Squaw River, Little Bald Lake, and Big Bald Lake, returning to Bobcaygeon for the night.

On Wednesday, May 4th, patrolled the waters of Sturgeon Lake; left steamer at mouth of Emily Creek, took rowboat and rowed to Emily Lake, and back by steamer. This creek is a grand place for spawning, the only drawback a great amount of spawn is lost when the water leaves, and to avoid that I think there should be screen put across the mouth of creek at C.P.R. bridge about two hundred and twenty-five feet wide; if this was done it would keep the bass and lunge in deep water. After leaving Emily Creek we ran to Bobcaygeon and took on coal, and then patrolled the waters of Pigeon Lake to Bates' Cottage, then took skiff and patrolled around the mouth of Omemee River. Wind was blowing too hard to take steamer in among the snags and stumps.

On Thursday, May 5th, patrolled the waters from Bales' Cottage to Chemong, thence to Buckhorn, and from there to Burleigh Falls, also patrolled with rowboat around Chemong Lake, and around Lovesick. On the way down from Gannon's Narrows, put on a shoal near Nicholl's Island, and had to get the steamer "St. Charles" to tow us off. On Friday, May 6th, patrolled the waters of Stoney Lake. with Capt. Hunter and Inspector Moore, and then ran to Lakefield to get steamer joint repaired. Could not get repairs in Lakefield, and had to come on to Peterboro on Saturday morning. On Saturday, May 7th, patrolled the waters from Lakefield to Peterboro, spent the rest of the day on repairs. On Sunday, May 8th, laid at Peterboro. On Monday, May 9th, had to repair shaft at Peterboro. On Tuesday, May 10th, finished repairs to shaft at 3 p.m., and left Peterboro for Lakefield, went as far as Nassau, but could go no further on account of boiler foaming. On Wednesday, May 11th, patrolled the waters from Nassau to Lakefield, from there to Young's Point, thence to Mount Julian and Eel's Creek, thence to McCracken's Landing and White Lake, thence to Burleigh Falls and Lovesick. Cleaned boat at Burleigh. Wind blowing a gale. On Thursday, May 12th, patrolled the waters from Lovesick to Buckhorn, thence to Nicholl's Island, then took lifeboat, and rowed to Herrington's marsh, and found three Indians in canoes, but could not catch them, so returned to steamer at 1 p.m., got dinner and took steamer to the south side of Herrington's Island, then took rowboat and went to the lower end of island, and waited until Indians came out of the marsh, searched the canoe, but found nothing but frogs.

On Friday, May 18th, patrolled the waters from Chemong to Bobcaygeon, thence to Sturgeon Point, then to mouth of Lindsay River, took skiff and rowed to the G.S.R. bridge in McClain's Bay. Came back to steamer and patrolled the waters to Fenelon Falls. On Saturday, May 14th, patrolled the waters from

Fenelon Falls to Bobcaygeon, thence to Herrington's Island, left steamer and took rowboat, and patrolled the big marsh around the island, but there was not a boat or canoe to be seen. Came back to steamer and proceeded to Chemong Park, and blew off the boiler so as to have it ready for inspection on the following Tuesday. On Sunday, May 15th, laid at Chemong Park.

On Monday, May 16th, patrolled the waters from Chemong to Buckhorn, thence to Lovesick, and Burleigh Falls, then to Young's Point, and on to Lakefield, on the way between Chemong and Buckhorn took up one night line with two hundred hooks. On Tuesday, May 17th, laid at Lakefield to have boiler inspected. On Wednesday, May 18th, left Lakefield at 7 a.m., and patrolled the waters from there to Burleigh Falls, and had to lay up during the afternoon on account of heavy wind. On Thursday, May 19th, patrolled the waters from Burleigh Falls to Buckhorn, thence to Bobcaygeon, and from there to Fenelon Falls, thence to Rosedale, and on to Kirkfield Canal.

On Friday, May 20th, patrolled from mouth of canal to Victoria Road, thence to Kirkfield lift lock and on to W. Lake Simcoe, laid at mouth of canal until morning. On Saturday, May 21st, patrolled the waters of Lake Simcoe, from mouth of canal to Thora Island, thence to Georgina and back to Beaverton, and from there to Orillia. Off Thora Island overhauled one fish boat, they had four salmon which weighed eight pounds each which had been caught with trawls, also overhauled two boats off Georgina, one of them had one salmon weighing about four pounds. There was one steam launch and one gasoline launch fishing at Strawberry Island, but had no fish illegally caught. On Sunday, May 22nd, laid at Orillia, and went to Severn River with Inspector McGinn. On Monday, May 23rd, patrolled the waters of Lake Simcoe from Orillia to Strawberry Island, dragged the shoal with skiff, but found no nets, then came back to steamer and ran to Thora shoal in a very heavy fog off Strawberry Island. Overhauled four rowboats, but all had trawled; no nets.

On Tuesday, May 24th, patrolled the waters from Beaverton to Georgina Shoal, thence to Snake Island, and Roach's Point, and on to Bradford, thence back to Roach's Point. On Wednesday, May 25th, patrolled the waters from Roach's Point to Jackson's Point, from there around to the east side of Georgina, then took skiff at 12 p.m. and dragged the channel between Georgina and the mainland, but got nothing. Came back to steamer at 5 p.m. In the meantime the wind had got up and blowing a gale, and had to run to Beaverton, and on the way our stern bearing became loose. On Thursday, May 26th, patrolled the waters from Beaverton to Fenelon Falls, including Balsam and Cameron Lakes, also Gull River. On Friday, May 27th, patrolled the waters from Fenelon Falls to Bobcaygeon, and went on Government dry dock to repair stern bearing. On Saturday, May 28th, patrolled the waters from Bobcaygeon to Fenelon Falls, thence to Rosedale, and on to Kirkfield lift lock. On Sunday, May 29th, laid at Kirkfield lift lock. On Monday, May 30th, patrolled the waters from lift lock to Lake Simcoe, from mouth of canal to Hawkestone, and from there to Barrie, dragged Hawkestone shoal, but found nothing. Laid over night at Barrie, and took on coal. On Tuesday, May 31st, patrolled the waters from Barrie to Big Bay Point, thence to eight-mile point, and on to Grape Island; dragged Shingle Bay, then back to steamer, and patrolled the waters to Beaverton. On Wednesday, June 1st, patrolled the waters from Beaverton to Port Boulster; left steamer at anchor, and dragged the bay around Duclos Point; also the Black River up to Pefferlaw. At that place there is situated a saw and planing mill, owned and operated by W. H.

Johnston, and all the shavings and sawdust is put in the river. I asked him about it. He said he knew it was against the law, but no person complained: he thought it no harm. I asked him to stop, and he promised to do so, and on my return to Beaverton notified Capt. Hunter: the sawdust from this mill often washes down to Beaverton. On June 2nd and 3rd laid at Beaverton on account of high winds. On Saturday, June 4th, patrolled the waters of Lake Simcoe from Beaverton to Jackson's Point, thence to Georgina Island and back to Georgina shoal, and from there to Thora Shoal and Thompson's Point, and to mouth of Kirkfield Canal, and on to Kirkfield lift lock. On Sunday, June 5th, laid at Kirkfield lift lock. On Monday, June 6th, patrolled the waters from lift lock to Coboconk, thence to Rosedale, and up to Burnt River, and back to Cameron Lake, and on to Fenelon Falls.

On Tuesday, June 7th, patrolled the waters from Fenelon Falls to Lindsay, thence to Sturgeon Point and Pleasant Point, and back to Grassy Point, and then to Bobcaygeon, and cleaned steamer. On Wednesday, June 8th, patrolled the waters from Bobcaygeon to Gannon's Narrows, thence to Herrington's Island. At this island took rowboat and dragged back to Island and around Nicholl's Island, and back to Beaverton, thence by steamer to Chemong Park and Heron's Island, and back to Chemong Village. Overhauled several canoes, but the Indians had nothing but a few frogs, and no trowling lines or fishing lines. On Thursday, June 9th, patrolled the waters from Chemong Village to Sandy Creek, to Buckhorn and Deer Bay Creek, thence to Wood Duck Creek and Lovesick, and on to Burleigh Falls, and from there to Inspector Moore's cottage. On Friday, June 10th, patrolled the waters from Inspector Moore's cottage to Eel's Creek, thence to lower end of Stony Lake, and back to Gilchrist Bay, thence to Jumper Island, and McCracken's Landing, thence to South Beach and to Young's Point, and on to Lakefield.

On Saturday, June 11th, patrolled the waters from Lakefield to Peterboro in heavy rain. On Sunday, June 12th, laid at Peterboro. On Monday, June 13th, patrolled the waters from Peterboro to Jubilee Point, Gore's Landing and Harwood with Capt. Hunter on board. On Tuesday, June 14th, patrolled the waters from Harwood to Idylwild, thence to Keen River, and on to Hastings, thence by train to Campbellford with Capt. Hunter to see Inspector Cassan. On Wednesday, June 15th, patrolled the waters from Hastings to Keene, thence to Bradsall's and Rainy Point, and on to Idylwild.

On Thursday, June 16th, patrolled the waters from Idylwild to Rainy Point, thence to Roach's Point, and back to Rainy Point and Harwood, then to Gore's Landing and Jubilee Point, and on to Wedlock's and Peterboro. On June 17th, 18th and 19th, laid at Peterboro for repairs. On Monday, June 20th, laid at Peterboro for repairs, having stays put in boiler by order of Inspector Thompson. On Tuesday, June 21st, laid at Peterboro for repairs of stern bearing. On Wednesday, June 22nd, laid at Peterboro for repairs. On Thursday, June 23rd, finished repairs at 4 p.m., and left for Lakefield, arriving there at 9 p.m. On Friday, June 24th, left Lakefield and patrolled the waters to Young's Point, from there to McCracken's Landing, thence to Crow's Landing and Eel's Creek, thence to Mount Julian and Burleigh Falls, Lovesick, Buckhorn and Nicholl's Island. On the way sold five guide licenses: also searched several fishing boats, but found everything according to law. On Saturday, June 25th, patrolled the waters from Nicholl's Island to Chemong Village, thence to Chemong Park and Heron's Island, and from there to Herrington Island and Gannon's Narrows, and thence to Bobcaygeon, and from there to Sturgeon Point, and on to Lindsay, and remained there

over Sunday. On Monday, June 27th, patrolled the waters from Lindsay to Sturgeon Point, thence to Fenelon Falls, and Rosedale, then back to Gull and Burnt River, and back to Fenelon. On Tuesday, June 28th, patrolled the waters from Fenelon Falls to Bobcaygeon, thence to Gannon's Narrows, and Ball Lake, and back to Bobcaygeon. On Wednesday, June 29th, patrolled the waters from Bobcaygeon to Buckhorn, thence to Nicholl's and Herrington's Islands and Chemong Park. On Thursday, June 30th, patrolled the waters from Chemong Park to Bobcaygeon, thence to Fenelon Falls, Rosedale, and Kirkfield Lift Lock on the way from Chemong to Bobcaygeon. Took up one night line with two hundred hooks, but found no owner.

On Friday, July 1st, patrolled the waters from Kirkfield lift lock to Thora Island, thence to Strawberry Island and back to Beaverton and from there to Roach's Point. On Saturday, July 2nd, patrolled the waters from Roach's Point to Bell Ewart, and took on Mr. Cox, then patrolled from Bell Ewart to Roach's Point, thence to Jackson's Point, and on to Beaverton. Mr. Cox took Canadian Northern to Toronto. On Sunday, July 3rd, laid at Beaverton. On Monday, July 4th, patrolled the waters from Beaverton to Strawberry Island, then on to Orillia and took on Inspector McGinn, and patrolled from there to Rama, thence to Longford Mills and Washago and back to Orillia. Patrolled the waters from Orillia to Hawkestone, thence to Barrie and from there to Big Bay Point. On Tuesday, July 5th, patrolled the waters from Orillia to Hawkestone, thence to Barrie and from there to Big Bay Point; also called at Orchard Beach, and in conversation with E. Campion and J. Gaudeau was informed that the salmon fishing this spring was better than in twenty years.

On Wednesday, July 6th, patrolled the waters from Big Bay Point to Bell Ewart, thence to Point de Grassie, and Roach's Point, and on to Jackson's Point. On Thursday, July 7th, patrolled the waters from Jackson's Point to Georgina Island, thence to Hawkson Shoal and Strawberry Island, Thora Island, Georgina Shoal, and then on to Beaverton. On Friday, July 8th, patrolled the waters from Beaverton to Port Boulster, took skiff and rowed to Pefferlaw and found Mr. Johnson, mill owner, had repaired his sawmill and planing mill, so that there was no sawdust or shavings going into the river, we returned to steamer, and ran to Georgina Shoal, and dragged there until 6.30 p.m., and returned to Beaverton. On Saturday, July 9th, patrolled the waters from Beaverton to Thora Island, thence to Georgina Shoal and Beaverton, and blew off and cleaned out boiler. Sold two angling permits. On Sunday, July 10th, laid at Beaverton. On Monday, July 11th, left Beaverton at 11 a.m., with Capt. Hunter on board, and patrolled the waters from Beaverton to Georgina Island, and from there to Kiswick and back to Roach's Point. On Tuesday, July 12th, patrolled the waters from Roach's Point to Inspector Samuel Coulter's, in company with Capt. Hunter, after returning to steamer we patrolled the waters from mouth of Holland River to Jackson's Point, and from there to Beaverton, and telephoned to Inspector McDonald to come to Beaverton. On Wednesday, July 13th, laid at Beaverton until 3 p.m. on account of high winds. Capt. Hunter left for Toronto at 8 a.m. At 3 p.m. wind abated, and we patrolled the waters from Beaverton to lift lock. On Thursday, July 14th, patrolled the waters from lift lock to G.T.R. bridge, thence to Carnagus Point, Bald Island and Coboconk, and interviewed Inspector Burcheall, and was informed there was good fishing, but not many Americans. Returned to boat and patrolled to Ant Island, thence to Rosedale, and on to Fenelon Falls.

On Friday, July 15th, patrolled the waters of Sturgeon Lake from Fenelon Falls to Bobcaygeon, thence to Lindsay at Sturgeon Point. Sold four angling permits. In Lindsay River I saw a number of black ducks which were very tame. On Friday morning Engineer Deveney was bleeding from the nose, and had to call Dr. Graham, of Fenelon Falls, who after several hours' treatment stopped the blood. Was not able to start on trip until 10 a.m., on account of engineer being weak. On Saturday, July 16th, patrolled the waters from Lindsay to Sturgeon Point, thence to Bobcaygeon, Oak Orchard and Nicholl's Island, and on to Chemong Park. Sold one guide license at Nicholl's Island.

On Sunday, July 17th, laid at Chemong Park. On Monday, July 18th patrolled the waters from Chemong Park to Nicholls' Island, Heron's Island, Deer Bay Creek, Gannon's Narrows, and on to Bobcaygeon. On the way searched five canoes and skiffs, but found everything according to law. Guides with licenses and Americans with permits. On Tuesday, July 19th, patrolled the waters from Bobcaygeon to Big Bald and Little Bald Lake, and from there to Bate's Island, left boat and took skiff and rowed to Bear Creek, where we were informed that the Indians were killing fish, on our arrival we found no trace of any illegal work, but any quantity of live bass and lunge; we returned to steamer, and ran to the mouth of Omemee River. Left steamer and took skiff, and went on shore, and on enquiry found that parties had been selling fish, and offering fish for sale, also that people had driven out from Peterboro for fish. Have reported same to Capt. Hunter. On Wednesday, July 20th, patrolled the waters from Gannon's Narrows to Oak Orchard, thence to Chemong Village and Nicholl's Island, Buckhorn, Deer Bay, Wood Duck Creek and Lovesick, and from there to Burleigh Falls. Searched several canoes and skiffs. One party of Americans had thirty-two bass and one lunge, and there were five in the party. They report the fishing fine. On Thursday, July 21st, patrolled the waters from Burleigh Falls to Inspector Moore's cottage, thence to Mount Julian, Glenwood, Belvadier, Eel's Creek, back to Glenwood, thence to Jumper Island, and McCracken's Landing, and from there to Inspector Moore's cottage for the night. Sold two angling permits at Belvadier, and one at Glenwood, on my second trip.

On Friday, July 22nd, patrolled the waters from Inspector Moore's cottage to McCracken's Landing, thence to Sandy Point, Sotu Beach, and Young's Point, and Lakefield, then on to Peterboro. On July 23rd, 24th and 25th laid at Peterboro. On Tuesday, July 26th, raised steamer at 12 p.m., and proceeded to Wolf Street wharf, took on coal and started for Stony Lake. On arrival at lift lock found it was not in working order, and had to return to Peterboro. On July 27th and 28th laid at Peterboro for repairs.

On Friday, July 29th, left Peterboro at 6.30 a.m., and patrolled the waters from there to Lakefield, Young's Point, South Beach and McCracken's Landing, thence to Belvadier and Mount Julian, from there to Inspector Moore's cottage, and Burleigh Falls, Lovesick Lake and Buckhorn. On the way searched several canoes and skiffs; also saw several Americans, but all had permits, guides also had their licenses, but on my arrival at Lovesick was informed there was some shooting in Deer Bay Creek, and I sent a message to Inspector Clarkson to look into the shooting, as I had not time to do so, as I had to be in Fenelon Falls for orders from the Department on Saturday night. On Saturday, July 30th, patrolled the waters from Buckhorn to Islinda, thence to Chemong Village, Chemong Park, Herrington's Island, Gannon's Narrows, Bate's Island, Bobcaygeon and Sturgeon Point, and on to Fenelon Falls for orders. Remained at Fenelon Falls over Sunday. On

Monday, August 1st, patrolled the waters of Cameron Lake, Gull River and Rosedale Canal, thence to Balsam Lake, also all the bays and Coboconk River, and as far as the Kirkfield lift lock. On Tuesday, August 2nd, patrolled the waters from lift lock to Beaverton, around Thora Island and Hawkestone, thence to Strawberry Island, and from there to Orillia. On Wednesday, August 3rd, patrolled the waters from Orillia to Orillia Narrows, from there to Strawberry Island, thence to Jackson's Point and Roach's Point, and back to Jackson's Point. On August 4th and 5th, laid at Jackson's Point owing to high wind. On Saturday, August 6th, patrolled the waters from Jackson's Point to Big Bay Point, thence to Barrie, and from there to Hawkestone, and on to Beaverton, where we spent Sunday. On Monday, August 8th, patrolled the waters from Beaverton to Port Boulster, then took skiff and rowed the Black River as far as LeBars. We took eight hundred feet of salmon net belonging to LeBars and Welsh. Returned to steamer and patrolled the waters of Lake Simcoe, around Georgina and Thora Islands, and returned to Beaverton.

On Tuesday, August 9th, patrolled the waters from Beaverton to Roach's Point, thence to Bradford and back to Roach's Point. On Wednesday, August 10th, patrolled the waters from Roach's Point to Fox Island, thence to Jackson's Point and around Georgina Duclos Point, and on to Beaverton. On Thursday, August 11th, patrolled the waters from Beaverton to Strawberry Island, thence to Orillia and back to Orchard and Strawberry Island. On Friday, August 12th, patrolled the waters from Strawberry Island to Beaverton, after leaving the island our condenser broke; we then took out rubber valves and ran high pressure to Beaverton, where on Saturday we made some repairs. On Sunday, August 14th, laid at Beaverton. On Monday, August 15th, patrolled the waters from Beaverton to Port Boulster, thence to Georgina and Thora Island, and to Inspector Thompson's, and lock five, and drove to Buchan, and on enquiry was informed that a party was shooting ducks. Returned to steamer and came to Kirkfield lift lock. On Tuesday, August 16th, patrolled the waters from lift lock to Balsam Lake, and all around the Lake into Coboconk and Rosedale, from there to Cameron Lake, thence up the Gull River to the Old Lock and back to Fenelon Falls, and on the way searched their huts for guns but found none. On Wednesday, August 17th, patrolled the waters from Fenelon Falls to Sturgeon Point, thence to Landy Point, Bobcaygeon and back to McClaren's Bay. Took skiff and rowed to Goose Lake in search of duck hunters, but found none, but at the mouth of Lindsay found Chief Isaac Johnson, of Scugog Indians, who had a lunge that only measured twenty inches.

On Thursday, August 18th, patrolled the waters from Lindsay to Scugog Lake, thence to Port Perry, arriving there at 1 p.m. Took on coal, and left Port at 3 p.m., arriving at Lindsay at 7.30 p.m.; also called at Port Hoover. On Friday, August 19th, patrolled the waters from Lindsay to Ball Point, thence to Sturgeon and Sandy Point, Score Rock and back to Emily Creek. Took skiff and rowed to Emily Lake, came back by steamer, and ran to McConnell's Island for the night. Got a net two hundred feet long in Emily Creek; also saw several large flocks of black ducks which seemed quite wild, as though they had been disturbed. On Saturday, August 20th, patrolled the waters from McConnell's Island to Bobcaygeon, thence to Emily Creek, and Sturgeon Point, and on to Lindsay for coal, where we spent Sunday. On Monday, August 22nd, patrolled the waters from Lindsay to Port Hoover, thence to Port Perry, at which place I had a conversation with Inspector George Hood, of Scugog Island. The fishing in this lake is fine,

improving every year, and plenty of ducks. On Tuesday, August 23rd, patrolled the waters from Port Perry to Washburn Island, thence to Cæsarea, and met Inspector Watson, who states that the family of Herrons of that place give him quite a lot of trouble, these people are related to the Herron's of Chemong Lake. After leaving Cæserea we proceeded to a point below Washburn's Island, and called on Inspector Parkins. He also states the law is well observed in that district. Now, the reason of short mileage on the 22nd and 23rd is shallow water and high winds. On Wednesday, August 24th, patrolled the waters from Lindsay to Bald Point, thence to Fenelon Falls and Sturgeon Point, thence to Bobcaygeon, where we lay for three hours on account of steamer "Beaver" having been stuck with tow coming out of locks after leaving Bobcaygeon; patrolled the waters to Gannon's Narrows, and laid there for the night, and was told there was some shooting down by Herrington's Island.

On Thursday, August 25th, patrolled the waters from Gannon's Narrows to Chemong Park, thence to Chemong Village and Herrington's Island, and Islinda. On the way took on Inspector Nicholls, and took canoe and paddled up Sandy Creek, where we heard some one was shooting duck; laid there until 8 p.m., and then came to steamer: also sent Chapell with skiff around Herrington's Island, on the way I searched four tents but found no guns of any kind: also some Americans with angling permits. On Friday, August 26th, patrolled the waters from Islinda to Buckhorn, on the way searched two tents, but found they had no guns. One tent American, the other from Peterboro, Ont. Left Buckhorn and patrolled to Deer Bay, left off Inspector Nicholls, who will look after this bay and Black Duck Creek. Patrolled to Lovesick and Burleigh, thence to Julian's Landing, Belvidier, and on to McCracken's Landing for the night. On Saturday, August 27th, patrolled the waters from McCracken's Landing to Young's Point, calling at South Beach, and on to Lakefield; cleaned out boiler and spent Sunday at Lakefield. On Monday, August 29th, patrolled the waters from Lakefield to Young's Point, thence to McCracken's Landing, Burleigh Falls, Lovesick, Buckhorn, Gannon's Narrows, and on to Bobcaygeon: also had Capt. Hunter, Game Warden of Belleville. On Tuesday, August 30th, patrolled the waters from Bobcaygeon to Fenelon Falls, thence to Rosedale, Kirkfield and Beaverton. Before leaving Bobcaygeon, I sent James Shappee back to Pigeon Creek with instructions to watch the said Creek until my return from Lake Simcoe. This was agreeable to Capt. Hunter. On Wednesday, August 31st, patrolled the waters from Beaverton to Jackson's Point, thence to Barrie, with Capt. Hunter and W. W. Holden, looking for a site for boathouse; also held court on steamer at Beaverton, and had one man fined five dollars for shooting ducks, and also another man ten dollars for the same offence: also had a case for illegal fish postponed until further orders.

On Thursday, September 1st, patrolled the waters from Barrie to Beaverton, thence to Kirkfield Canal, Rosedale, and Fenelon Falls. On Friday, September 2nd, patrolled the waters from Fenelon Falls to Sturgeon Point: thence to Bobcaygeon, Gannon's Narrows, where we took on Mate James Chappee and proceeded to Buckhorn, Black Duck Creek, where I left Mate Chappee to look for duck hunters: proceeded on to Lovesick, Burleigh Falls, to await Chappee. On Saturday, September 3rd, patrolled the waters from Burleigh Falls to Young's Point; thence to Lakefield and on to Peterboro', where I spent Sunday. On Monday, September 5th, patrolled the waters from Peterboro' to Hastings, calling at Wedlocks, with Mr. Cox on board.

On Tuesday, September 6th, patrolled the waters from Hastings to Oge

River, Roach's Point, and McNaughton's Island for the night. On Wednesday, September 7th, patrolled the waters from McNaughton's Island to Idylwild, Harwood, Gore's Landing, Bewdley, and back to Jubilee Point for the night. On Thursday, September 8th, patrolled the waters from Jubilee Point to Bewdley, Gore's Landing, Harwood, and Hiawatha; thence to mouth of Trent River, and back to Idylwild, and on to Keeth's Creek. On Friday, September 9th, patrolled the waters from Keeth's Creek to Rice Lake and up to Peterboro'. On the way searched the principal creeks for nets and duck hunters, but found everything O.K. On Saturday, September 10th, patrolled the waters from Peterboro' to Lakefield, cleaned steamer, and spent Sunday at Lakefield. On Monday, September 12th, patrolled the waters from Lakefield to Young's Point, Burleigh Falls, Lovesick, Buckhorn, and on the way searched seven canoes, but found every think O.K. All were non-residents, and had angling permits from Buckhorn. We went to Gannon's Narrows for the night. On Tuesday, September 13th, patrolled the waters from Gannon's Narrows to Bobcaygeon, thence to Bald Point, and back to Emily Creek, and Lindsay, to meet Capt. Hunter. On Wednesday, September 14th, patrolled the waters from Lindsay to Bobcaygeon, and to mouth of Pigeon Creek. Took skiff, rowed and walked to William O'Neil's. Came back to Chemong Village and Park, where we met Capt. Hunter. On Thursday, September 15th, patrolled the waters from Chemong Park to Buckhorn, thence to Burleigh Falls, Young's Point and Lakefield, and on to Peterboro'. On Friday, September 16th, patrolled the waters from Peterboro' to Jubilee Point, Gore's Landing, Harwood, and thence to Idylwild to the mouth of Trent River, and back to Rock Island, where we took skiff and rowed to Keene, and on the Keene River took up a small net about one hundred feet long then came back to steamer for the night.

On Saturday, September 17th, patrolled the waters from Rock Island to Rama Point, then took skiff and rowed to Washburn's Island. Came back by steamer to Peterboro, where we remained Sunday. On Monday, September 19th, patrolled the waters from Peterboro' to Lakefield, thence to Young's Point, Burleigh Falls, Lovesick, and Buckhorn, and on to Gannon's Narrows for the night. On the way found one non-resident fishing without a permit, but was quite willing to buy, and as I had to get to Fenelon Falls to distribute fish, sold the permit and continued to Gannon's. On Tuesday, September 20th, patrolled the waters from Gannon's Narrows to Bobcaygeon, thence to Emily Creek and Sturgeon Point, and on to Fenelon Falls. On the way sold one duck hunter's license. On Wednesday, September 21st, distributed fish in Cameron, Sturgeon and Pigeon Lakes: ten thousand in number, equal parts in each lake. Fish from Brantford Hatchery. On Thursday, September 22nd, patrolled the waters from Sandy Point to Gannon's Narrows, thence to Buckhorn, Chemong, and back to Gannon's Narrows. On Friday, September 23rd, patrolled the waters from Gannon's Narrows to Bobcaygeon, thence to Emily Creek, Sandy Point, Sturgeon Point, and on to Lindsay. On September 24th and 25th laid at Lindsay for repairs. On Monday, September 26th, patrolled the waters from Lindsay to Fenelon Falls, thence to Gull River, Rosedale, Coboconk, and Kirkfield Lift Lock to Rosedale. Sold one shooting permit to a Canadian who lives in Detroit. On Tuesday, September 27th, patrolled the waters from Kirkfield Lift Lock to Beaverton; from there to Strawberry Island, intending to stay for the night, but had run to Orillia Narrows on account of high wind. On September 28rd patrolled the waters from Orillia Narrows to Lavalle's Point; thence to Pine Point, and all around the north shore of Lake

Simcoe off Strawberry Island. This work was done with a rowboat, as the lake was too rough for steamer; also very shallow.

On Thursday, September 29th, patrolled the waters from Orillia Narrows to Strawberry Island, thence to Hawkestone Shoal; thence to Big Bay Point, Georgina Shoal, Duclos Point, Thora Shoal and on to Beaverton for coal. On Friday, September 30th, patrolled the waters from Beaverton to Georgina, thence to Fox Island, Roache's Point. Saw Inspector Tillett, and arranged for fall work. Returned to steamer and went to Jackson's Point, where I stayed for the night on account of high winds. On Saturday, October 1st, and 2nd, stayed at Jackson's Point owing to high wind. On Monday, October 3rd, patrolled the waters from Jacksons' Point to Georgina Shoal: took skiff and dragged shoal, but wind and anchor would not hold, so came to Beaverton and took on coal, and patrolled around Thora Island until evening, then came to Beaverton to meet W. W. Holden.

On Tuesday, October 4th, patrolled the waters from Beaverton to Strawberry Island, thence to Orillia Narrows, and on to Orillia, with W. W. Holden on board. Very heavy wind and rain. On Wednesday, October 5th, patrolled the waters from Orillia to Thora Island, thence to Beaverton, with W. W. Holden on board, who left on the 2 p.m. train for Toronto. Laid the remainder of the day in Beaverton, expecting to go on the lake at night, but about 7 p.m. the wind raised and the night very dark and raining. On Thursday, October 6th, bound at Beaverton owing to wind. On Friday, October 7th, patrolled the waters from Beaverton to Thompson's Point, thence to Thora Island, Georgina Island, and back to Thora Island, which I patrolled on foot until 12 p.m. Returned to steamer, and at 5 p.m. Mate Shappee left to patrol the island on foot, and returned at 8 a.m., with one thousand yards of net, one fish boat and some salmon and two white fish, taken from James White & Son.

On Saturday, October 8th, patrolled the waters from Thora to Beaverton and dried nets; also had new drag made. On Sunday, October 9th, laid at Beaverton. On Monday, October 10th, patrolled the waters from Beaverton around Thora Island, and laid at Thora Island all night, and patrolled the island on foot. On Tuesday, October 11th, patrolled Thora Island on foot both day and night. On Wednesday, October 12th, patrolled Thora Island on foot: also patrolled to Beaverton and Georgina Shoal, and around Thora Island with boat. On Thursday, October 13th, patrolled Thora Island on foot: had to send boat to Beaverton on account of high wind. On Friday, October 14th, patrolled the waters of Lake Simcoe from Thora Island to Beaverton: thence to Georgina Shoal, Trout Shoal, and back to Thora Island. On October 15th and 16th, patrolled the waters from Thora Island to Beaverton.

On Monday, October 17th, patrolled Thora Island on foot all day, and at 8 a.m. saw boat running net about two miles in lake: went to steamer, got up steam, and proceeded to place where skiff had been, and after dragging about one hour got about one thousand yards of net and a quantity of bass and salmon: let all the bass and live salmon go free. On Tuesday, October 18th, patrolled the waters of Lake Simcoe until noon, then ran to Beaverton to meet Capt. Hunter: after the latter left at 4.30 p.m., took steamer and proceeded to Georgina Shoal, but had to return to Beaverton on account of wind and foggy weather. On Wednesday, October 19th, patrolled the waters of Lake Simcoe from Beaverton to Georgina Island, thence to Duclos Point, and around the big shoal, but got nothing there. Went to Woodman's Shoal, dragged it, and then went to Big Shoal north of Thora, but got nothing: then came to Thora Harbour for the night, two men patrolling on foot until 11 p.m., but nothing doing: returned to boat.

On Thursday, October 20th, patrolled the waters of Lake Simcoe, around Thora Island until driven in by the wind. We ran to Beaverton, where we took on coal; also found a small net, about two hundred yards; it was no good; no fish in it. On Friday, October 21st, left Beaverton at 2 a.m., proceeded to Georgina Shoal, dragged them, but found nothing; also dragged Duclos Point, then proceeded to Thora Island Shoal, but had to run back to Beaverton, arriving there at 10 a.m.; reason for returning, high wind.

On Saturday, October 22nd, raised steamer at midnight, but on account of wind shifting from east to south-west, and blowing a gale, had to lay at Beaverton, and remained there for Sunday. On Monday, October 24th, patrolled the waters of Lake Simcoe, leaving Beaverton at 4 a.m. and going to Georgina Shoal; thence to Thora Island, Big Shoal north of Thora. Had to return to Thora on account of high wind, and patrolled island on foot until 6 p.m. On Tuesday, October 25th, patrolled Thora on foot from 6 a.m. until 9 a.m.: then returned to steamer, as the wind raised, and could not lay at Thora, and left for Beaverton. Wind blowing a gale. On Wednesday, October 26th, left Beaverton at 7 a.m. and patrolled Georgina Shoal: thence to Woodman's Shoal and Big Shoal north of Thora; thence to Strawberry Island, Trout Shoal, Shingle Bay, and down to Hawkestone Shoal, and back to Orillia Narrows for the night: walked from there to Orillia, and saw Inspector McGinn, and he reports there is nothing doing in this end of the lake. On Thursday, October 27th, left Orillia Narrows at 6 a.m. and came to Strawbery Island: patrolled around the shoals, but found nothing. We started for Beaverton, intending to drag around Thora Island, but on account of heavy wind we stayed at Beaverton and did no go out again, as the wind continued to blow. On October 28th, and 29th and 30th, patrolled the waters of Lake Simcoe and around Thora, but had to return to Beaverton on account of high wind. On Monday, October 31st, patrolled the waters from Beaverton to Thora Island, thence to Georgina Shoal and on to Jackson's Point. On Tuesday, November 1st, patrolled the waters from Jackson's Point to Georgina Shoal, thence to Duclos Point, Thora Island Shoal, and back to Woodman's Shoal and into Beaverton. On Wednesday, November 2nd, bound at Beaverton owing to wind. On Thursday, November 3rd, patrolled the waters from Beaverton to Inspector Thompson's, thence to Big Shoal north of Thora to Woodman's Shoal, Georgina, and back to Thora and Strawberry, Trout Shoal, and thence to Beaverton for coal. On Friday, November 4th, laid at Beaverton, and spent the day looking after blocking and getting prepared to lay up steamer. On Saturday, November 5th, was spent looking for lumber and other things required for laying up steamer for the winter: also collecting accounts. On November 6th, laid at Beaverton. On November 7th patrolled the waters from Beaverton to Lock Four, Kirkfield Canal, to lay up steamer for the winter. November 8th, 9th and 10th was spent laying steamer up for the winter, and discharged crew, and they left for Belleville from Beaverton Station at 5.40 p.m. Steamer's outfit stored at Hector McDonald's residence, Thora Township, Ontario County: also shipped nets to Capt. Hunter at Belleville by freight.

Logged 5,823 miles.

REPORT OF THE WORK PERFORMED BY THE PATROL BOAT "NAVARCH" ON THE RIDEAU WATERS AND BAY OF QUINTE DURING THE YEAR 1910.

Left Belleville on Monday, the 25th April, after three days fitting out the boats. Patrolled to Trenton and back to Belleville. Next day to Deseronto, and from there to Picton. The rest of the week visited Prinyer's Cave, Northport, and Belleville, around Mosquito Bay and Telegraph Light, remaining in port at Belleville over Sunday. Under Captain Hunter's instructions proceeded to Murray Canal on Monday. Sent the cook and mate to Weller's Bay with Overseer Hayes to patrol the bay, but they did not find any nets. Took Captain Hunter to Trenton. Held Court on boat. No convictions. Left next day for Belleville, where the Engineer had to put in some grate bars. On Wednesday went to Lenen's Cove and around Hay Island and on to Hay Bay. Seized about 1,500 yards of night lines, 2,000 more the next day, then left for Kingston and patrolled around the head of Wolfe Island and Simcoe Island. At Kingston over Sunday, leaving again on Monday for Emerald, and through the Upper Gap to Deseronto, and the following day to Belleville. Wind blowing a gale. The engineer overhauling the air pump. Patrolled around Mosquito Bay and up the Napanee River. On Friday patrolled from Belleville to Kingston, with the "Ella C." in tow. Mr. Thompson, the Inspector, inspected the "Ella C." on Saturday.

The following week patrolled to Emerald under Captain Hunter's instructions. Found no illegal work going on in the Upper Gap. Patrolled to Gananoque and Rockport, and around Grenadier Island. Thick fog on Saturday. On Monday went to Grenadier Island and on to Gananoque, from there to St. John's Island and on to Kingston, where we patrolled in small boat around Bell's Island amid very heavy fog, and seized about 2,000 yards of gill net in the Lower Gap of Nine Mile Point. Down to the foot of Wolfe Island, but found nothing wrong. Went from Kingston on Friday through the Batteau Channel, up the lake and around Amherst Island. Spent Saturday scrubbing and cleaning the boat at Kingston, remaining there over Sunday.

On Monday went down around Howe Island, and next day through the Batteau Channel and around Simcoe Island and down to Marysville. Visited Napanee and Murray Canal and Trenton, and on Saturday went up the Napanee River, around Mosquito Bay, and to Belleville for Sunday. The next week patrolled from Belleville around Mosquito Bay and Baker's Island, and had to return to Belleville to get a new piston in air pump; then on to Mosquito Bay, Amherst Island and Howe Island, where we seized about 100 yards of old gill net, which we destroyed. Seized one hoop net at Hay Bay on Saturday.

On Monday, June 13th, visited Amherst Island and Kingston, and the following day went to Howe Island and Gananoque, and on to Brockville. Broke piston in air pump, and had to get a new one put in. On Friday and Saturday the boat was out of water, having her rudder and stern repaired, and also condenser pipes. On Sunday patrolled to Kingston, and on Monday to Wolfe Island and back to Kingston, then on to Newboro, and the next day to Westport, Big Rideau, Portland, Garrett's Rest, Angler's Inn, Gem Island, Rideau Ferry, and on to Smith's Falls. The remainder of the week was spent between Merrickville, Ottawa, and Smith's Falls, and up among the islands in the Big Rideau, and on to Newboro. Went to Westport to see Overseer Clark, who was away at Wolfe Lake. Spent Sunday at Newboro.

On Monday patrolled from Newboro to Kingston, and on Tuesday to the Brothers Islands and around Amherst Island. As it was too rough to go to Pigeon Island, patrolled on to Belleville, and next day raised the "Navarch" out of the water to have her scraped and painted, which work occupied a week. Did some patrolling with the small boat. Launched the "Navarch" the following Thursday, and on Friday patrolled up around Baker's Island. Patrolled to Mosquito Bay and down to Telegraph Island on Saturday, and on Sunday went from Belleville to Kingston.

The next week was spent patrolling in the neighborhood of Kingston, Wolfe Island, Howe Island, Gananoque, Grenadier Island and Brockville, and the week following in the vicinity of Brockville, Gananoque, Belleville, Brothers Islands, Brighton, Wellers Bay, and Consecon, on Saturday patrolling Big Bay along with Overseer Fox.

On Monday, July 25th patrolled down to the mouth of Shannonville River and over to Big Island, and on Tuesday to Glen Island, and from there to Emerald. Next day went to the Ducks, from there to Pigeon Island, and on to Kingston. On Thursday and Friday visited Kingston, Belleville, and Whitby, and on Saturday patrolled from Whitby to Toronto, and back to Whitby. Patrolled to Charlotte on Sunday, remaining there over Monday. Leaving on Tuesday for Belleville. Left again on Wednesday for Big Bay and on to Kingston, next day to Morrisburg, and on Friday to Lachine, patrolling to Montreal on Saturday, and from there to Grenville, leaving on Sunday for Ottawa.

On Monday the 8th August patrolled to Merrickville, and then on to Smith's Falls to take on coal. From there proceeded to the Big Rideau and Newboro, and the next few days patrolled in the neighborhood of Kingston, Belleville, Amherst Island and the Brothers Islands. On Friday went to Picton and patrolled the waters of East and West Lakes. Spent Saturday repairing boiler door and valves. Remained at Belleville over Sunday.

Left Belleville on Monday the 15th, going to the Upper Gap, and from there to the Ducks, Pigeon Island, and in to Kingston, and next day to Colensby and around the Brothers Islands and Simcoe Island: on Wednesday to Wolfe Island and around the head of Horseshoe Island. Remained in Kingston all day Thursday, as the weather was too bad to venture out. On Friday patrolled to the Brothers Islands and on to Bath, then out through the Upper Gap to the Duck Islands and Pigeon Island, then back to Kingston. On Saturday visited Merrickville and patrolled the north side of Wolfe Island. Left Kingston Monday for Howe Island and patrolled around through the islands at Gananoque. Remained at Gananoque all next day, where Mate Redner patrolled for six hours with Overseer Toner. Left on Wednesday for Grenadier Island, thence to Brockville: from Brockville to the North Channel on Thursday, and remained in port on Friday cleaning up the boat, the wind blowing hard. Patrolled to Grenadier Island on Saturday and around the island. Spent Sunday at Brockville.

On Monday the 29th August went to Gananoque, and on Tuesday patrolled with Overseer Toner for three hours among the islands, then up to Kingston and around Howe Island, the rest of the week being spent patrolling between Kingston, Wolfe Island, Gananoque, Main Ducks, Brothers Islands, Amherst Island, Picton and Belleville.

Patrolled Hay Bay and some other bays up to Belleville on Monday the 5th September, and next day went to Trenton and back to Baker's Island and up the Murray Canal. Spent Wednesday at Belleville taking the smoke stacks off so

that the engineer could clear the tubes, fix the boiler and change the grate bars. The next two days patrolled to Big Bay and Kingston, down the north side of Wolfe Island and around Howe Island; and on Saturday patrolled with the launch down to Kingston Mills, where Mr. Thompson had to set safety valves on "Navarch." Spent Sunday patrolling the marsh from Kingston to Kingston Mills and back to Kingston. There was no one hunting or shooting. The next week patrolled to Newboro, Westport, Smith's Falls, Merrickville, and through the Rideau Lakes, Mud Lake and Clear Lake; and on Saturday patrolled to Westport in gasoline launch, while the men were cleaning the boat up. In port at Newboro over Sunday. Left on Monday for Kingston, and on Tuesday patrolled around Amherst Island, and on information that there were Americans shooting without license, went up as far as Deseronto and found they had license. The rest of the week patrolled to Gananoque, Brockville, Grenadier Island, Kingston and Deseronto, and spent Sunday in Belleville. On Monday patrolled from Belleville to the Murray Canal, patrolling five hours in small boat, and on Tuesday to Big Bay and Deseronto, and back to Belleville. Next day went to the Upper Gap, and from there to Collins Bay. On Thursday seized about 1,200 yards of gill net at Hay Bay, and stored it in the boathouse. Next day patrolled Hay Bay in the morning, and from there went to Belleville: to Picton on Saturday, and back to Deseronto; and patrolled to Belleville on Sunday.

On Monday, October 3rd, patrolled up to Baker's Island—patrolled five hours in small boat. The following day went to Prinyer's Cove and lay there for the night, as there was a heavy sea on. There were nine boats in there waiting for fit weather to go out. Next day went to Kingston, and on to Birmingham's Landing for the "Ella C." and towed her back to Kingston. On Thursday patrolled out from Kingston about three miles, and had to run back to Kingston for shelter. Wind blowing hard. On Friday patrolled to Belleville with the "Ella C." in tow, and on Saturday hoisted the "Ella C." out of the water, repairing her and putting on wheel. Patrolled up above Belleville Bridge on Sunday for three hours with small boat. Worked for four hours on the "Ella C." on Monday morning, and for six hours at the "Navarch." On Tuesday, October 11th, hoisted the "Navarch" out of the water and laid her up for the season.

Logged 6,521 miles.

REPORT OF THE WORK PERFORMED BY THE YACHT "VEGA" ON THE NORTH CHANNEL OF LAKE HURON AND GEORGIAN BAY DURING THE YEAR 1910.

On Saturday the 30th April, left Little Current at 2 p.m., and arrived at Gore Bay at 8 p.m., with Overseer Oliver on board. Remained at Gore Bay till Thursday, as the weather was cold and stormy, when we left for Duck Island, and landed Overseer Oliver. Left again on Saturday at 5.30 a.m., calling at Cockburn Island at noon, and arrived at Gore Bay at 8 p.m. Repaired engine on Monday, and on Tuesday went to Cutler, John's Island and Newport, leaving on Wednesday for Little Current. Wind blowing a gale. Spent the rest of the week between Little Current, Spanish and Gore Bay.

On Monday patrolled to Hog Island, then back to Killarney, and next day called at Collin's Inlet, Beaverstone and Toad Island, remaining there all the following day on account of bad weather. Called at the Bustards on Thursday, and arrived at Byng Inlet at 7 p.m., where we met Overseer Watt. Left next morning

The "Vega."

at 5, called at the Bustards, and arrived at Killarney at 8 p.m. Went to Little Current on Saturday and remained over Sunday. Left on Monday for Gore Bay and spent Tuesday (Victoria Day) there getting new muffler made. Wind blowing a gale on Wednesday, so had to remain till next day, when we started at 8 a.m. for Cockburn Island, calling at Meldrum Bay on the way. Next day visited Bruce Mines and St. Joseph Island, arriving at Thessalon at 8 p.m. Left next morning at 6. Called at a fish station on French Island, and Blind River. Took Overseer Bradbury to Cutler, and arrived at Little Current at 8 p.m., staying there until Tuesday, when we left for Oak Harbor, calling at Spanish River and John Island on the way.

On Wednesday, June 1st, left Oak Harbor at 7 a.m., ran to Whitefish, and arrived at McGregor's Bay at 6 p.m Next day patrolled around McGregor's Bay, and arrived at Partridge Island at p.m. On Friday called at Shequindah on the way to Little Current, where we arrived at 6 p.m. Spent Saturday there painting deck of boat, as it was leaking. On Monday called at Round Island, then at Fitzwilliam Island, leaving there next day at 7 a.m. Ran to South Bay, then to Squaw Island, and on Wednesday to Toad Island, where we found signs of trap nets, so patrolled all afternoon with small boat. Left next morning at 8 and patrolled to Beaverstone, then to Collin's Inlet and Killarney Point. Next morning climbed up on a mountain and sighted a mast behind another island, but when we came near the parties ran away. When we arrived where they had been, we found a seine. We then ran to Killarney at 10 a.m., took on Overseer Pitfield and patrolled the bay west of Killarney, then on to Little Current, arriving at 10 p.m.

On Monday, June 13th, left Little Current at 8 a.m., called at Killarney and Collin's Inlet, and arrived at Toad Island at 5 p.m. Left next day at 7 a.m. for Byng Inlet, calling at the Bustards on the way. On Wednesday took Overseer Watt to Duchesne Clubhouse, where we found the skin of a fawn almost fresh, which Mr. Watt took. We then ran to Washcooting River, and then to Pointe au Baril, where we arrived at 9 p.m. Left there next morning at 6 for Parry Sound, starting again next morning at 5, patrolling to Pointe au Baril, and then to Byng Inlet. On Saturday left Byng Inlet at 7 a.m. Seized a seine at Killarney, and then went to Little Current, arriving at 10 p.m.

On Monday, June 20th, went to Shequindah, and on Tuesday to Fitzwilliam Island and South Bay, on Wednesday to Duck Island, on Thursday to Cockburn Island and Hilton, on Friday to Bruce Mines, St. Joseph's Island, and Milford Haven, and on Saturday to Thessalon, where we remained over Sunday. Left on Monday morning at 9, going to Blind River, where we arrived at 3. Next day went to Spanish, and on Wednesday to St. John's Island. Left on Thursday at 7 a.m. for Gore Bay, remaining there until Monday getting a top for boat.

Left on Monday, July 4th at 8 a.m. for Little Current, arriving there at 2 p.m. Next day called at Partridge Island and Killarney, then ran to Toad Island. Next morning went to the Bustards, and on Thursday to Byng Inlet and Point au Baril. Left on Friday at 7 a.m., calling at the Ojibway House on the way to Parry Sound. On Saturday left with Overseer Langhington at 8 a.m., and ran to where he thought there were trap nets, but found none, and returned to Parry Sound. Left there on Monday for Sans Souci and Copperhead, and on Tuesday ran to Moon River. Next day ran to Buffalo House and Copperhead, arriving at 1 p.m. Left there next day at 8 a.m., and arrived at Minnecog at 2 p.m. On Friday left at 10 a.m., and arrived at Penetang at noon, remaining there till Monday the 18th, when we left again at 8 a.m., having heard of illegal fishing at Minnecog. Patrolled around there all day, but found nothing.

On Tuesday, July 19th, ran to a small fishing station at Moose Point, and on Wednesday patrolled amongst the islands to Yankanuck, and next day patrolled to Moon Falls. On Thursday called at Buffalo House, Copperhead and Sans Souci, and on Saturday ran to Parry Sound, calling at a number of houses. Left Parry Sound on Monday and patrolled to Skerryvore, and for the two following days patrolled among the islands, calling at the Ojibway House, Point au Baril Station, back to Point au Baril, and on to Byng Inlet on Thursday. On Friday called at the Bustards, Beaverstone, Collin's Inlet, and Killarney, arriving at Little Current at 10 p.m., remaining there over Saturday and Sunday.

On Monday, August 1st, got word from Kagawong of parties guiding without license, but found nothing wrong. The following day received word from Constable Milligan, of an American yacht fishing off Barrie Island without license, but the boat had left before we arrived. Ran from Barrie Island on Wednesday to Gore Bay, where we left Constable Milligan, then went to Little Current. On Thursday went to Black Point, where we had to run in on account of storm, and remain until Saturday, when we left there and patrolled to Bad River. We picked up and burnt two trap nets on the way, then ran to Point au Baril.

On Monday, August 8th, found it was not necessary to go to Parry Sound, so patrolled amongst the islands all day, and the two next days as well. Left Point au Baril on Thursday for Parry Sound, and next day ran to Copperhead Island and Yankanuck, and on Saturday patrolled to Penetang. Monday and Tuesday were spent patrolling between Penetang and Minnecog and the waters above Minnecog. On Wednesday took Overseer McKinney and ran out to the Giant's Tomb, where we picked up two trap nets and one boat, and then ran to Cognashene Lake. The following day got word that there were trap nets between there and Moose Point, but we could not find any. Met Overseer Dusang, and then ran to Moose Point. Next day patrolled to Copperhead, Sans Souci and Parry Sound, remaining at the latter place over Sunday.

On Monday, August 22nd, patrolled to Skerryvore, and on Tuesday among the islands to the Ojibway House. Next day went to Byng Inlet, and on Thursday called at the Bustards, Killarney and Little Current. Next day ran back to Killarney with Constable Ramesbottom after a boat that was reported to be fishing without permits. On Saturday ran back to Little Current. Ran to Gore Bay on Monday to repair clutch; on Tuesday to Killarney; on Wednesday to Point au Baril, and on Thursday patrolled amongst the islands to Skerryvore. The following day went to Shebeshekong, and on Saturday to Parry Sound. Had to remain at Parry Sound until Tuesday on account of fog. Left on Tuesday and patrolled to Skerryvore, and on Wednesday patrolled to Ojibway and Point au Baril, and then on to Byng Inlet, remaining there until Saturday on account of bad weather. Went to Little Current on Saturday, calling at the Bustard Islands and Killarney.

On Monday, the 12th September, left at 2 p.m. for Spanish, and next day patrolled to Oak Harbor and Cutler, thence to Blind River. On Wednesday, went to Cockburn Island, and on Thursday to Meldrum Bay, and to Gore Bay for the night. Next day ran to Kagawong, and thence to Little Current.

Left Little Current on Monday, and patrolled to Killarney. The following day ran to Fitzwilliam Island, calling at Squaw Island. At Fitzwilliam Island all day Wednesday, as it was blowing hard. Left on Thursday for Partridge Island, and on the following day ran to Little Current. On Saturday ran to Gore Bay, calling at Kagawong.

On Monday, 26th September, left Gore Bay and ran to Blind River, calling

at Gallilee and Cutler. Next day ran to Thessalon, remaining there all day Wednesday, as it was too stormy to go out. On Thursday ran to Milford Haven and patrolled amongst the Islands, where trap nets were reported to be. Then ran to Cockburn Island, and on Friday called at Meldrum Bay, Gore Bay and Little Current. As it was blowing hard, had to remain there till Monday.

On Monday, October 3rd, started for Killarney, but had to pull in at Partridge Island on account of storm. Ran to Killarney next day, but could not go on, as it was still blowing. As storm still continued on Wednesday, could not go to Fitzwilliam Island, so ran back to Sheguindah, and next day to Whitefish. On Friday called at Haystack Harbor, where the railway is being built, then on to Little Current.

On Monday, October 10th, left Little Current and ran to Killarney, and the next day to Spanish River. On Wednesday ran to Blind River, calling at Cutler and John's Island, and next day patrolled to Thessalon and St. Joseph's Island. On Friday went to Meldrum Bay, and on Saturday to Gore Bay, spending Sunday there. Left Gore Bay on Monday and ran to Little Current, thence to Killarney on Tuesday, remaining there over Wednesday on account of the fog. It was blowing so on Thursday we could not go to Fitzwilliam Island, so ran to Partridge Island. Still blowing on Friday, so we ran back to Little Current, where we had to spend Saturday and Sunday.

On Monday, October 24th, left Little Current and ran to Oak Harbor; on Tuesday to Egg Island, on Wednesday to Meldrum Bay, where we were compelled to remain for the next two days, owing to stormy weather. Left on Saturday for Gore Bay, and on Monday ran to Little Current, and spent Tuesday there fixing up the "Edith M." Went to McGregor's Bay on Wednesday, and next day patrolled the waters and shores looking after game. For the next five days we lay at anchor, and on Tuesday, the 8th November, moved around among the islands. Next day lay at anchor again, and went to woods to see what was going on in two or three places where hunters were, and found everything all right. Returned to Little Current on Thursday through a heavy snowstorm. On Saturday, the 12th November, we laid the yacht "Vega" up for the winter.

Logged 4,642 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "FLORENCE" ON THE WATERS OF THE NORTH SHORE OF THE GEORGIAN BAY DURING THE YEAR 1910.

On Thursday, April 14th, went to Musquash after trap nets, and grappled all day, but got nothing. Grappled again the next day till noon, then started for home, arriving at 5 p.m. The following Tuesday left for Moon River, got to Sans Souci at four o'clock, but had to go to Moon Falls, as there was no place to stop at. Got there at 7.30 p.m. through a heavy sea. Started again next morning at 5 for Moon River, and got to Sans Souci at 4 p.m., and to Moon River at 7.30. Sea still very rough. Grappled all day Thursday up to Moon Falls, and then to North Channel. Could not get out next morning till 10.30, owing to fog, when we went to Wan Bannos Land, grappled all around in and out of the islands. No sign of any person or nets, so went back to Buffalo House for the night. Left next morning at six for Twelve Mile Bay, then left for Musquash, arriving there at

6.30 through rough weather. On Sunday two gasoline boats came from Penetang with ten men, to find out if the pickerel were spawning. Told them that they could not fish with rods, and the sooner they got out the better, so they went away.

On Monday, 25th April, left Musquash at 6.30 for McCradam's and worked around till afternoon. Blowing a gale. Remained till next morning, as weather raging. No pickerel spawning there yet. Saw only one Indian trapping. The following day left for Quarry Island, but as the storm was still raging, with rain, decided to try for home, especially as provisions were getting short, also gasoline oil. Ran into an island, and stayed there till 2 p.m. Got home at 4 p.m. through fearful wind and sea. On Wednesday left for Quarry Island, got to Green's Island, but met such heavy north-west wind had to return. Overhauled engine and cleaned her up after the heavy trip she had had. As it was still blowing a gale next day, went to work and built oil house and got our tank in it, so now we can get our oil without walking, as it is up against boathouse. Have everything locked up. The following day went to Port Severn and return, and to Waubaushene and return, and on Saturday went to Sturgeon Point, grappling for nets, but got nothing.

On Monday, May 2nd, left for Moon River, but had to come back. Rained all day. Next day started for Moon River, and got as far as Pinery Point, where we stayed till morning, leaving again at 6 a.m. Called at Honey Harbor, and got to Moose Point at 1 p.m. Then went on to Buffalo House at 5 p.m. Roy went to Sans Souci, and I stayed and dried the bedding, as everything was wet through. Left again for Moon River on Thursday at 6 a.m., arriving there at 8 a.m. No fishermen there, nor at Blackstone. On our way to Muskoka Mills the wind got up, and we lost our bedding. After it had floated for an hour we got on shore at Pine Island. We lost two paddles, dishes and provisions, and got home at 9.30 p.m. We grappled at Sturgeon Bay on Friday, but got nothing. For four days it was too stormy to go out, but on Wednesday, May 11th, we patrolled to Waubaushene and Potato Island, and on Thursday grappled all day at Muskoka Mills, but got nothing. Continued grappling on Friday till 2 p.m. Got trap net and any amount of fish, and let all go that could swim, and destroyed net. Left for home on Saturday, and grappled at Quarry Island, Sturgeon Point and Green Island, getting nothing.

On Monday, May 16th, left for Musquash, and got a trap net, which we brought home and destroyed. Next day left for Moon River, and when near Giant's Tomb the engine broke down and we had to be towed home. About 24 miles from home, were grappling when she broke down again, and we did not get home till next morning at 9. Went out in canoe to Green Island and Sturgeon Bay, but got nothing. Took the canoe again on Thursday and went to North River and Coldwater River looking after spearing. Friday being a holiday (King Edward's funeral) did not go out, but took wheel off and straightened shaft, and next day put boat on dry dock and finished shaft. Sick at home for about two weeks.

On Monday, June 6th, went out, but had to return, as engine heated. The following day went to Port Severn and put up notices, thence to Beausala Island, where we had reason to believe nets were set. Grappled for them, but found none. Went to Thompson's Island on Wednesday, and then on to the east end of Giant's Tomb, grappling. Spent Thursday at Honey Harbor, Quarry Island and Potato Island, putting up notices, and the next day at Port Severn, where we met the first Americans of the season, who had their angling permits. Put up posters all day Saturday.

On Monday, June 13th, went to Honey Harbor and Beausala Island looking for illegal nets, and on Tuesday left for Sans Souci, Moose Point and Copperhead, calling at all tourist cottages where any one was living. Next morning went to Musquash, calling at all tourist houses, then up to South Honey Harbor and Potato Island, and found one American, who had a license. Went to Giant's Tomb to the north-east end on Thursday, worked all among the islands, but got nothing. Came back to Beausala Island for the night. Left next day for Quarry Island and worked all the way home. Everything all right. Spent Saturday at Waubaushene, Sturgeon Bay, North River, and around Coldwater River. On Monday left for Moon River, calling at Honey Harbor, Moose Point, Copperhead, and Sans Souci, arriving at Buffalo House at 6 p.m. Spent the whole of the week between Moon River, Iron City, Musquash, Beausala Island, Quarry Island, Pinery Point, Port Severn, Waubaushene, Sturgeon Bay, Matchedash Bay, and Victoria Harbor. Very few travelling as yet.

Left for Sans Souci on Monday, June 27th, but on account of the heavy sea had to stay at Split Rock till next day, when it was still blowing. Travelled all around Cognashene, South and North Honey Harbor, and saw very few tourists. Grappled for nets at Quarry Island on Wednesday, and next day got one eight-foot net, which we brought home and destroyed. Went to Honey Harbor on Saturday and visited tourist resorts.

On Monday, July 4th, left for Moon River, visiting all tourists in and out of Honey Harbor, Whalen's, McCrae's, Lake Musquash, and got as far as Split Rock for the night. The following day left for Copperhead, where we sold eight permits to new arrivals. On Wednesday went in to Moon River by the south channel, up the Moon, and got a man to pilot us to Blackstone. Returned to Copperhead for the night. Left next morning at 4, calling at Whalen's and other places, and on Friday went to Honey Harbor, Cognashene and all around, also to McCrae's Dam, Musquash, and back to Tomahawk Point for the night. Returned to Honey Harbor on Saturday, and from there to Midland, where we stayed six hours. Had boat punctured.

Left for Honey Harbor on Monday, 11th July, and the next few days visited Musquash, McCrae's Dam, Whalen's, Indian Harbor, Wallace Fish Station, Copperhead, Moon River, Iron City, Crawford, as well as all tourist houses and the Sans Souci Hotel. Weather very rough, and wind blowing almost a gale. Very few tourists. On Thursday left for home, visiting Nickerson's three summer resorts, also the Royal Hotel, Whalen's summer resort; and on Friday started for Penetang, but had to return owing to the heavy wind. Went by train to Penetang to meet Capt. Hunter, while Roy went to Port Severn and Potato Island. Made twenty calls on Saturday through the rain.

On Monday, July 18th, started out from Fesserton at 5.30 a.m., calling at Potato Island near Waubaushene. At Newman's cottage, Honey Harbor, got one illegal permit. Called at Victoria House, Royal Hotel, Nickerson's House and store, and patrolled around South Honey Harbor. Called at Hewitt House. Went to McCrae's Dam, arriving at 11 a.m. Laid the boat up for two hours repairing engine. Got word of a trap net near Giant's Tomb, and searched for an hour, but sea was too heavy, and we did not get any trace of it. We then went to Minnecog, but saw no fishermen out. Back to Honey Harbor and waited for fishermen to come in. Left for home at 5.30 p.m. Called at 15 private cottages and sold eight permits. Spent Tuesday patrolling between Port Severn, Potato Island, Sturgeon Bay, Sturgeon Point, and Waubaushene. Started next morning

at 6 in search of trap net at Beausala Island, as we had heard there was one there, and after trolling all around for about three hours, the wind got up and we had to return, having had no trace of trap net. Left next morning at 6 for Moon River. Got as far as Potato Island, when gale got up and we had to return, as the sea was too heavy for the "Florence." Started at 6 a.m. on Friday, visiting all the hotels and private cottages at Honey Harbor, McCrae's Dam and Musquash, where we remained all night. Heavy wind blowing all day. On Saturday left for Sans Souci at 4.30 a.m., and called at both hotels and several cottages. Remained at Sans Souci over Sunday.

On Monday, 25th July, started at 7 a.m., and made 15 calls at hotels, clubs and private cottages. Left the following morning at 6.30 for Moon River, visiting Iron City Club and all the clubs and private cottages to Moon River Falls. Started at 5.30 a.m. on Wednesday from Sans Souci, calling at hotels at Honey Harbor, arriving home at 3.30 p.m. Left at 5 next morning for Severn River, portaged at Port Severn, and arrived at Mordaulphon Club, Severn River, at 8 a.m. Examined all permits, and went to Washington Club about three miles, and examined permits there. Sold ten, patrolled around Gloucesterpool, and called at private cottages. On Friday, visited hotels and private cottages at Honey Harbor. Blowing a gale all day Saturday, so could not go out with boat. Spent the whole of the next week among the cottages and hotels at Honey Harbor, Sans Souci, Copperhead, Iron City Club and other clubs, examining their permits. For the three days the weather was too rough to go home.

On Monday, 8th August, visited Waubaushene and Sturgeon Bay, looking for a trap net at Sturgeon Point, but could get no trace of it, and saw very few rod fishermen. The next few days were spent, as the week previous, among the cottages and hotels, examining permits and looking after trap nets. Got one large leader on Friday near Waubaushene. The following Monday called at fish houses at Waubaushene and Sturgeon Bay, and for the next two weeks or more visited several clubs and made a great number of calls at different places.

On Monday, September 5th, went to Musquash and McCrae's Dam, and then had to return on account of rain. Rain still continued in torrents next day, but on Wednesday started out and got as far as Quarry Island. Got a trap net on Thursday, which I destroyed. Went to Moon Falls and returned by north channel to Buffalo House, after the largest day's work of the season. Left next morning for Copperhead, but could not get over, as the sea was too heavy. Went down inside to Twelve Mile Bay. Blowing a gale, so stayed in boat all night. Made calls next day all the way home through a very heavy sea. On Sunday visited Potato Island, Honey Harbor, McCrae's Dam and Musquash. Spent Tuesday and Wednesday grappling for nets around Beausala Island, and on Thursday crossed over to Midland to get shaft put in. Spent Friday and Saturday looking after hunters, and saw a good many, also a number of trollers. For the next ten days patrolled around among the different places mentioned, looking after duck hunters, grappling for nets, etc. On Thursday, the 29th September, got a night line set for sturgeon in McCrae's Lake—100 yards and 30 hooks—which I destroyed. Weather very rough for several days. On Friday, October 7th, made the roughest trip of the season. Saw very few hunters or fishermen. Grappled for nets on Saturday, but got nothing. The following week was the roughest of the season, so could not do very much. Grappled for nets several days, but got nothing.

On Monday, October 17th, left for Moon River, calling at Honey Harbor, Musquash, Moose Point, Jubilee Island and Buffalo House. Went up north chan-

net to Moon River and returned south channel. Ran over to Cunningham and held up several boats. Trout commenced to come on shoals. Left on Wednesday for Giant's Tomb and Split Rock. Found a long string of nets, and was just going to take it up when owner appeared. Gave him a good calling down for not having name on. Next day left for north shore near Quarry Island. Got eight steel traps set for mink, also a patent wooden mink trap. When a mink goes in, he sets the trap for another one. The following day went to Waubaushene to hire boat to go to Hope Island to look after duck hunters. Wind blowing hard. Tried to go to Midland next day, but the heavy wind and sea broke the rudder, so had quite a time to get home. Attempted both on Monday and Tuesday to get to Hope Island with the boat hired for the purpose, but wind too strong. Arrived there on Wednesday, 26th October: visited a number of fishermen, and seized a box of nets nearly a mile long belonging to caretaker of lighthouse. Boat went ashore next day. Visited Giant's Tomb on Friday, also Musquash, McCrae, Honey Harbor and Quarry Island, and spent Saturday getting ready to go to Moon River on Monday morning.

The following ten days patrolled around among the several places, sometimes in very rough weather, grappling for nets, etc. On Wednesday, November 9th, worked around all day amongst the islands, and got about 100 yards of pike net, 3½ extension measure, which I took and dried. Rained all forenoon next day, and snowed all afternoon, and water too thick with snow the next two days to venture out.

On Monday, 14th November, went to Waubaushene by train. Met hunters going out, with all their deer tagged and having licenses. Visited several places the next few days by train, and on Monday, 21st November, hauled boat out of water, and next day canvased her over for winter, and put canoe away in barn.

Logged 4,526 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "MAGGIE MAY" ON NORTH SHORE OF GEORGIAN BAY DURING THE YEAR 1910.

On Monday, April 25th, patrolled the waters to the Rapids on Magnetawan River to see if any one was spearing pickerel, and found that some one had been there, as I found two pickerel on the shore that had been speared. On Thursday patrolled to Sand Bay, seized a seine, punt, sailboat and fish on two Indians; I also seized seines on two others, and was assisted by Overseer R. J. McKinny. The next day I went to the magistrate to lay information for illegal fishing.

Saturday, the 7th of May, the boat was disabled on account of the furnace being out of order. On Thursday, the 12th May, patrolled to the rapids on Magnetawan River to see if any one was spearing fish, and for several days following I kept a close watch for any illegal work.

On Tuesday, May 17th, I patrolled to Naishcotyang River to look for trap nets and to see what some parties were doing. The following day I returned to see what some law-breakers were committing. The next day I patrolled up the river in search of trap nets and found one trap net on an island in Burritt's Bay, south of Byng Inlet Light. I brought the trap net home with me in order to have it identified.

On Friday, May 27th, went up to the rapids on Magnetawan River, a distance of ten miles. The following day patrolled to Naishcotyang River, and in other bays looking for trap nets: was assisted by Mr. C. H. Knight.

On Monday, 30th May, patrolled to Big Light to serve a summons on a party for illegal fishing with a seine; also a subpoena for another law-breaker. Owing to the non-appearance of one of the chief witnesses the court was adjourned for a week to secure a warrant for the party's arrest. The following day went to Sand Bay, Bustard Islands and French River to see what the fishermen were doing and to get a statement from R. J. McKinny *re* some violations of the law. I got storm-bound and had to stay at French River at a boarding-house. Left the following day and went to Key Harbor.

On Thursday, June 2nd, left French River and Bustard Islands and patrolled to Key Harbor, and inspected nets and saw signs of illegal fishing. I warned the parties and left there for Big Light and Burritt's Bay. Here I saw signs of illegal fishing and was assisted by Mr. C. H. Knight in capturing the guilty parties.

On Saturday, June 4th, patrolled up to the rapids on Magnetawan River; here we shot a hound that had been running deer. He was running at large in the bush. Went up to Byng Inlet to attend court to settle some infractions of the Game and Fishery Law. The case was dismissed, but was appealed.

On Wednesday, June 15th, patrolled with Captain Irwin and the "Crusier" to pilot him through the channel to Naishcotyang River. While at the Duquesne House we discovered a fawn—skin, bones and liver—and a quantity of hair and blood of a larger deer. I took possession of the skin for witness.

On Friday, June 24th, went to the Duquesne House to serve a summons on a man for killing deer out of season. We also subpoenaed another man as witness. The next day spent at court. The following day went up to town for supplies for boat.

On Thursday, June 30th, went to Bustard Islands with launch, and on to Sand Bay and Key Harbor. Got statement from Mr. Kennedy about illegal fishing, and also a statement from R. J. McKinny.

On Saturday, July 2nd, patrolled up Still River, arrested a man for illegal fishing, went on to Geroux Creek or River to serve a violator of the law and to subpoena witness, patrolled to Bad River to see and investigate certain pound nets, and put up some posters.

On Friday, July 8th, went up to town to attend court. A certain party did not appear and I got a warrant out for his arrest. Went to his house and searched his place and seized some seines and nets.

On Saturday, July 9th, went to town to send money to the Department. On Monday went up to court, but it was adjourned until definite orders would come from the Department. The following day went to the Duquesne House to see if any more Americans came in from Pittsburgh, Pa., but they had not arrived, but were expected every day. Went again some days later and sold angling licenses. Saw a deer on an island that had been shot by some unknown party; it had been dead about a week. The next day I went up to town to send money to the Department. On my return I went to the Duquesne House and Foster's Island to see what the tourists were doing, and to inspect some small bass that had been caught at Foster's Island.

On Sunday, August 28th, patrolled up to rapids on Magnetawan River to watch for parties that are hunting and killing deer on this day. Was accompanied by C. H. Knight. We caught one man with a deer and gun, and we took

possession of both. The following day went up to town to attend court. A fine of $20.00 was imposed for killing deer, and $5.00 for carrying a gun.

On Tuesday we patrolled the creek in search of hounds that were running deer. We shot two. On our return trip we called at the Duquesne House and sold four angling permits.

On Sunday, 11th September, I accompanied Capt. Irwin to pilot him through the inside channel to the Bustard's with the "Vega." On Monday, with C. H. Knight, patrolled the French River in search of trap nets. Went on the train from Byng Inlet to Bobs Siding on C. P. R., then up the north branch to first rapids. Camped there all night and returned the next day.

On Wednesday we started back for Bobs Siding and got there at 8 o'clock p.m., took the midnight train to Byng Inlet Station, came into town by stage. We did not find any trap nets, but saw where there had been bullhead nets set, but they had been removed.

On Tuesday went to Burrot's Bay and shot a hound that was running deer. On Friday patrolled to Geroux Creek in search of illegal hunters; heard shooting but could not locate the hunters. Went to the upper end of Geroux Lake and saw two boats, also found a deer's head that had been recently killed.

On the following day I received a telegram from J. W. Jermyn, and went up to town to answer it, and to see if I could find any trace of the parties who were hunting. I had a certain party arrested and sent telegram to the Superintendent for instructions. Left Wiarton Friday morning by C. P. R. for Toronto, reaching there at midnight. Left Toronto on Saturday by G. T. R. for Wiarton, and had a man tried for fishing with a seine at Sand Bay. He was fined $20.00 and costs. Left the following day for Byng Inlet and reached home at 8.30.

Logged 1,104 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "STELLA" ON LAKE ERIE, KNOWN AS INNER LONG POINT BAY, DURING THE YEAR 1910.

On Monday, April 18th, sailed over to the bar across the bay, staking grounds for carp fishing; about seven miles of a trip; was away about five hours. The following day we sailed over again and settled some disputed territory between some fishermen. The next Friday went down the bay to Bobwood's Point for bass for hatchery.

On Thursday, April 28th, crossed the bay to Long Point, down the point to breakwater, dividing up fishing grounds for the fishermen.

On Monday, May 9th, sailed across the bay and back to Rice Bay, looking after the fishing grounds along the shore. On Thursday went to Lucky Point and back, and sailed over the bar and divided up some carp fishing grounds.

On Tuesday, May 24th, went down North Shore of Long Point Bay to Lucky Point, and returned looking after the fisheries along that shore. The following Saturday went down the bay to St. Williams, and from there to Lucky Point.

On Tuesday, June 7th, went across to Sturgeon Bay and down the shore to the cottages, looking after the different fisheries along the shore. On Monday, June 13th, crossed the bay to Club House, thence down the South Shore to lighthouse, looking after the carp fishing, and found everything very satisfactory. Went over to the cottages, from there to Rice Bay Club House, and inspected the bass fishing. From here I went up to the west end of Bay of Big Creek Club House, and found everything all right. The following day went across to the cottages and to Rice Bay Club House.

On Friday, July 1st, crossed to Sturgeon Bay and down to Thoroughfare Point. From here I went to the cottages and back looking after the bass fishing. The next day patrolled the waters and went to Rice Bay Club House.

On Tuesday, 12th July, crossed to Sturgeon Bay, thence to the Club House, and ran down through the North Channel out in the Outer Bay, looking after some anglers that came across in their boats; found everything very satisfactory.

On Thursday, July 21st, went over to the bayside, getting some license fees, and inspected the bass fishing. From here went down to North Channel, around by cottages and Rice Bay Club House, and across to Sturgeon Bay and up to Big Creek Club House.

On Monday, August 1st, went across to the Club House, down along the bar to Sturgeon Bay, from there to Rice Bay Club, thence around North Channel and up to the cottages. The next day we went to Lucky Point and looked after the fishing grounds, crossed to Sturgeon Bay and down to Rice Bay Club House again.

On Monday, August 29th, patrolled down to Bobwood's Point, looked after some fishing grounds, crossed over to the Club House and out along the bar watching the ducks, thence to Old Cut Point and up along the bar, then patrolled down to Rice Bay and up along the South Shore looking after the fishing and ducks.

On Monday, July 12th, drove to Port Burwell; stopped over night; came back Tuesday, saw Allie Wismer about fishing; another tug in the place of the "Play Fair," which was undergoing repairs, found everything as reported and all going very satisfactory. The following Wednesday we went down to Simcoe by train, drove over to Dover to see David Tow about license fee for tug "Ogle," came back to Simcoe by train, then took the train from Simcoe to Jarvis. Went down to Jarvis to catch the 6 p.m. train from Dover to Hamilton to examine some fish boxes; found everything all right.

Ran over to Sturgeon Bay and up along the bar, looking after the fishing and hunting in a general way. Went down to Thoroughfare Point, then down the shore across Rice Bay to see about getting some bass for the hatchery. Drove down to Turkey Point, then on to Normandale, looking after the fishermen at those places. On September 30th I went down the Bay off Thoroughfare Point and back looking after the duck shooting in a general way. From here to Bobwood's Point and back, then over to Sturgeon Bay and down to Big Rice Bay looking after the hunters and placing their decoys. Then we went over to the Club House and down along the bar, crossed to Sturgeon Bay and up along the west bar, inspected the duck shooting and found everything satisfactory.

On Thursday, October 27th, went over to the Club House, then down to Sturgeon Bay, then up to the western end of the bay looking after some decoys that were reported to be set out too far. I found everything very satisfactory and feel satisfied that the hunters are trying to live up to the law.

Logged 628 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "THE SHARK," ON THE WATERS OF THE BAY OF QUINTE, DURING THE YEAR 1910.

On Thursday, March 31st, patrolled to Massassaga Cove, and then to Cedar Island, and then to David & Daniel Belnap's Fishery, and found the fishing all right.

Saturday, April 2nd, patrolled to Belleville on business with Mr. Gault and James N. Macdonald one day. On Saturday, April 9th, patrolled up the Bay in the afternoon to Massassaga, and then along the shore as far as Belleville, ran into Belleville and was there one hour, left for home, and arrived in about half past six, found nothing wrong.

On Monday, April 11th, patrolled from Northport in the afternoon Wolfe Island to R. & A. MacDonald's Fishery, and to LaRue Fishery, and then to Root Brothers and J. R. Belnap's, left there and patrolled along the highshore about three miles and arrived home about six o'clock.

On Monday, April 18th, patrolled down the Bay and up the beach, but not to the end of my division, then came back and stopped at Deseronto a few minutes and went to Northport.

On Wednesday, April 20th, I patrolled up the Bay from Northport to Point Ann, and delivered three licenses, and went to Mosquito Bay, examined several fisheries, and then went to Belleville, had dinner, left at one o'clock for Rossmore, and visited three other fisheries down the Bay. Arrived home at six o'clock. On Monday, May 2nd, I patrolled the Bay and called at all the fishing stations in the west end of my division, and found all the hoop nets out of the water, and everything in good shape. Was out all day excepting one half hour for dinner in Belleville. On Thursday, May 5th, left Northport at six o'clock to patrol the eastern part of my division, and found every fisherman obeying the law, but on my way back, I found a piece of gill net on the reel, but did not seize it, as I could not tell whether he was fishing it or not. Was at sea about ten hours.

On Friday, May 13th, we patrolled from Northport down the Bay, and called at Deseronto, and went down the beach, but found no one violating the law. On Saturday, May 28th, left at 7 a.m. Patrolled to Belleville, where we met Capt. Hunter at the dock and left there about eleven o'clock for Trenton, as Mr. Hunter had several cases in Court at that place, and left at 4 p.m. for Belleville, and had some trouble with the perforating wheel, which was fixed at Belleville. Arrived at Northport about eight in the evening. On Thursday, June 9th, I patrolled down the Bay and called at Deseronto, saw Mr. Gault, he saved me the trouble of taking down the notices, was there about half an hour. I went down the Bay and found the night-lines with their names on and buoys set. Returned about eight in the evening. On Wednesday, June 15th, we patrolled up to Mosquito Bay, searched the marsh at the end of Big Island, and on that part found one night-line that was not tagged, and I seized it, then returned at twelve o'clock. On Saturday, June 18th, patrolled the Bay in the afternoon as far as Thompson's Wharf, I delivered licenses and posted notices, found everything all right and returned. On Saturday patrolled to Mosquito Bay, dragged for night lines, but found none. Went to Massassaga and then to Belleville to see Capt. Hunter. On Thursday, July 14th, patrolled down the Bay in the afternoon, but found nothing wrong. On Saturday, July 16th, we patrolled around Mosquito Bay, and then to Massassaga Point and home, found nothing wrong.

On Tuesday, July 9th, patrolled the Bay, found a few Americans, but they said they were not fishing. I was away all day and returned about eight in the evening. On Saturday, July 23rd, patrolled up the Bay to Belleville with Capt. Fleming, and went to Mosquito Bay, as we had information that there was illegal fishing going on, but we dragged all afternoon, and found nothing. We returned to Belleville, and arrived home about eight in the evening. On Monday, July 25th, patrolled up to Mosquito Bay, and was there all the forenoon, and found nothing

wrong. I returned about one o'clock. On Thursday, July 28th, I patrolled down the bay in pursuit of anglers, and found that two of them had sold their permits, and returned.

On Saturday, July 30th, I patrolled up the Bay as far as Belleville, went to Mosquito Bay, and found no illegal fishing. On Tuesday, August 2nd, I patrolled down the bay, sold two anglers' permits and returned about three o'clock. On Friday, August 5th, patrolled up the Bay, but it being so rough, I had to return. On Monday, August 8th, we patrolled the Bay, called at Massassaga Park, went on to Rossmore and sold one permit. Called at Belleville, and then down to Mosquito Bay, and home. Was at sea about eight hours. On Tuesday, August 9th, I patrolled the Bay to the end of my division, went around Glen Island and then back, but found no anglers without permits. On Wednesday, August 17th, I patrolled up to the north side of Big Island, and on the west end of same, and found one non-resident, sold him a permit and returned. On Friday, August 19th, patrolled down the Bay to the end of my division, found two anglers and sold them permits.

On Tuesday, August 23rd, patrolled down the Bay to the end of my division, but found no anglers fishing without a permit. On Friday, August 26th, patrolled to Mosquito Bay, and left at four a.m. and returned at noon, but was unable to catch the violator of the game laws. On Monday, August 29th, I patrolled the north side of Big Island, and up to Mosquito Bay. Sold one permit. On Tuesday, September 6th, we patrolled the Bay to Massassaga Park, and then to Seguin marsh, and remained there till nine o'clock in the evening, then returned home. On Monday, September 12th, we patrolled to Mosquito Bay, left at four a.m. and arrived at Seguin Marsh at five. We left there and went to Rossmore and Belleville, had a talk with Capt. Hunter and returned home. On Wednesday, September 14th, we patrolled to Mosquito Bay in the afternoon and stayed till eight in the evening. Friday, September 16th, patrolled to Massassaga Point, as there were non-residents there, but could not find them, so returned. On Saturday, September 17th, patrolled to Massassaga on the same business. On Thursday, September 22nd, we patrolled up the Bay to Point Ann and sold a permit to an occupant of the houseboat there. Returned at noon. On Wednesday, September 28th, I patrolled the Bay to the east end of my division and found no violations, but on my return met the "Navarch," and had a few minutes' talk with Capt. Hunter, and returned about two o'clock in the afternoon. On Thursday, September 29th, patrolled up the Bay and visited six fisheries and arrived home about two o'clock.

On Wednesday, October 5th, I patrolled down the Bay to the end of my division, delivered one domestic license and examined one net. On Monday, October 10th, we patrolled as far as Bay Bridge, and called at Rossmore. On Thursday, October 13th, we patrolled down the Bay, delivered three domestic licenses and called at several fisheries, and found their nets all right. On Monday, October 17th, patrolled up the Bay, left home at four a.m. and found an old crippled man fishing without a license, so I let him go as it was near evening. On Friday, October 21st, patrolled down the Bay, left home at three a.m. Examined several nets out in the Bay and found them all right.

On Monday, October 24th, we patrolled up the Bay to Rossmore and delivered C. Thompson his license, and then went to Mosquito Bay, and delivered Root Brothers license. Called at several fisheries and found them fishing all right. On Wednesday, October 26th, patrolled down the bays to Deseronto, to see Mr. Gault, as I had information of some illegal fishing going on in his division. The offenders were a couple of Indians, who are a very hard people to deal with.

Logged 1,240 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "AGGIE B" ON THE BAY OF QUINTE AND LAKE ONTARIO, DURING THE YEAR 1910.

On Sunday, May 29th, left Picton at 4 a.m., patrolled the waters around Indian Point to Wampose and to Point Traverse, arriving at 10.30 a.m. and left at 12.30 for Main Ducks, arriving at 3 p.m. Were compelled to remain here on account of bad weather. The following day we left here at 4 a.m. for Point Traverse, arriving at 6.30, interviewed some fishermen and patrolled on to the head of South Bay and then back to Picton.

On Sunday at 9 a.m. patrolled waters to Cressy, arriving at 12 noon and left at 2 p.m. and patrolled to Picton. Here had dinner for myself and man.

On Sunday, June 19th, left Picton at 5 a.m. and patrolled the waters to Indian Point, arriving at 8 a.m. and left at 10 a.m. for Picton, arriving at 2 p.m.

On Sunday, June 26th, at 7 a.m. patrolled waters to Glenora, arriving at 8 a.m. Posted fishermen notices, left for Bongards, posted notices there and left for Cressy, thence to Princess Cove, then on to Point Traverse, arriving there at 1 p.m. I interviewed some fishermen and left at 3 p.m. for False Ducks and Timber Island, and then returned to Picton, arriving at 10 p.m.

The following Friday we left Picton, patrolled the waters by way of Wampose to Point Treverse, arriving at 11.30, and left at 2 p.m. and patrolled the waters by way of Timber Island and False Ducks to Picton, arriving in Picton at 8 p.m.

On Sunday, July 10th, at 6 a.m. we patrolled from Picton to False Ducks, a distance of 35 miles, leaving at 12 noon for Main Ducks, arriving at 1.30 p.m. Here we were obliged to stay on account of the weather, a violent wind storm coming up and for the two next days were detained on account of the storm.

On Sunday, August 7th, went from Main Ducks to Picton, arriving at 4 p.m., a distance of forty-five miles. We patrolled from here to Princess Cove and back to Picton, patrolling the waters to Hay Bay and from there to Picton, arriving at 7 p.m.

On Sunday, August 15th, we left Picton at 9 a.m. and patrolled the waters to Hay Bay, arriving at 12.30, a distance of fifteen miles. On Sunday we patrolled from Picton, leaving at 4 p.m. and went to Bongards, but did not stop any time and returned to Picton, arriving there at 9 p.m., a distance of ten miles. On the following Wednesday we patrolled water to Storms, Prinyers Cove, Indian Point, the Rock, and Correy's Landing, arriving at Wampose at 8 p.m., a distance of thirty-five miles.

On Thursday we left Wampose at 7 a.m., patrolled the waters to Picton, arriving at 12 noon, a distance of thirty-five miles.

On Sunday, 28th August, at 9 a.m. we left Picton and patrolled the water to Prinyers Cove, arriving at 12.30 p.m. and left there at 4 p.m., patrolling waters to Picton and arrived at 7.30.

On Sunday, September 4th, we patrolled from Picton, leaving there at 6 a.m. to the Rock, then to Timber Island, from there to Main Ducks, arriving at 1 p.m., a distance of fifty miles. We remained here all Monday on account of wind storm. The following day we left Main Ducks at 8 a.m., patrolled the waters to Point Traverse, and from there to Wampose Island, a distance of 8 miles.

Leaving Picton at 12.30 p.m. patrolled waters to Bob Bongards, arriving at 2 p.m. and we left here for Picton at 3 p.m. and arrived there at 5.30.

On Thursday we patrolled the waters to Storms, arriving at 4 p.m., a distance

of thirteen miles. Leaving Storms for Picton, arriving at 6.30, a distance of thirteen miles. Leaving Picton at 9 a.m. we patrolled the waters to Prinyer's Cove.

On Wednesday, October 12th, left Picton at 3 p.m., patrolled the waters to below Glenora, arriving at 4 p.m. and leaving here at 5 p.m. we patrolled to Picton and from here to Wampose and back to Picton.

On Sunday, October 23rd, patrolled from Picton to Prinyer's Cove, arriving at 11.30, a distance of 19 miles.

Logged 1,312 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "BESSIE G" ON THE WATERS OF THE ST. LAWRENCE RIVER, DURING THE YEAR 1910.

On April 14th patrolled the waters from Wolfe Island to Batteau Channel and around Simcoe Island.

On April 20th left Wolfe Island and patrolled the waters to Simcoe Island, where stopped. Saw most of the fisherman and found everything all right. Went from there to Read's Bay and found nothing wrong there.

On April 27th patrolled from my place to the foot of Wolfe Island and from there to Big Bay, and from there to Button Bay. Found no illegal fishing. Saw most of the fishermen.

On Thursday, May 5th, left Wolfe Island and patrolled the waters to Barrett's Bay, and on to Garden Island. Found nothing illegal.

On Saturday, May 7th, patrolled the waters from Wolfe Island to Brown's Bay and McDonald's Bay, stopped there; no reports of illegal fishing.

On Friday, May 20th, patrolled the waters from Wolfe Island to Big Bay, and on to Alexander Point and Button Bay, and around the foot of Wolfe Island. I found nothing wrong in that vicinity.

On Victoria Day patrolled the waters from Wolfe Island to Garden Island and from there to the foot of Simcoe Island. Found no complaints, and returned to Wolfe Island.

On Friday, June 3rd, patrolled the waters from Wolfe Island to Horseshoe Island. Here I met some of the fishermen and their reports were favourable; no illegal fishing being done in that vicinity.

On Tuesday, June 7th, patrolled the waters to Read's Bay, by the way of the Batteau Channel. I saw some of the fishermen and found nothing wrong. The following day patrolled the waters from my place to Read's Bay and the Batteau Channel: found everything in legal shape.

On Monday, June 20th, patrolled from Wolfe Island to Marysville; met the "Navarch" with Mr. Cox and Capt. Hunter on board and went from there to Simcoe Island and to Read's Bay. Had no complaints of illegal fishing.

The following Saturday patrolled the waters from Wolfe Island to Big Bay and through the Channel to Marysville. Met some anglers, they all had licenses.

On Tuesday, 28th June, patrolled the waters from Wolfe Island to Alexander Point, opposite Cape Vincent. Met no anglers and did not see any net fishermen, and found no nets.

On Saturday, July 2nd, patrolled from Wolfe Island to Seeder Island. Here I received a telephone to meet a party and a house boat. From there we went to Simcoe Island and to Read's Bay at the head of Wolfe Island. Did not see any anglers nor any nets set.

On July 16th patrolled the waters from Wolfe Island to Garden Island and from there to the head of Simcoe Island and returned home. The following Saturday again patrolled the waters to Simcoe Island and to Read's Bay and from there to Big Sand Bay.

On Wednesday, July 27th, patrolled from Wolfe Island to Barrett's Bay and from there to Horseshoe Bay and then to the head of Simcoe Island.

The following Tuesday patrolled from Wolfe Island to Big Bay and from there to the head of Wolfe Island and Read's Bay, and from there to Simcoe Island and Garden Island.

On Wednesday, August 10th, left Wolfe Island and patrolled to Simcoe Island and Horseshoe Island, from there to Read's Bay: met a few anglers, who reported very small catches.

On Wednesday, August 17th, patrolled from Wolfe Island to Big Bay and on to Alexander Point, found nothing wrong. No complaints of illegal fishing.

On Friday, August 19th, patrolled from Wolfe Island to Barrett's Bay, from there to Batteau Channel and then to Read's Bay and from there around the head of Simcoe Island.

On Wednesday, August 24th, patrolled from Wolfe Island to Big Bay, and from there to Big Sand Bay at head of Wolfe Island and Batteau Channel and Simcoe Island and Horseshoe Island.

On Wednesday, September 7th, patrolled from Wolfe Island to Brown's Bay and on to Simcoe Island and Horseshoe Island.

On Monday, Septembed 11th, patrolled the waters from the foot of Wolfe Island to Big Bay and to Button Bay. The following Wednesday patrolled to Simcoe Island, and from there to Read's Bay and Big Sand Bay.

On Saturday, September 24th, patrolled around the foot of Wolfe Island and from there to Big Bay, and to Button Bay and to Alexander Point. On the following Thursday patrolled the same waters and found everything in legal shape. No complaints of illegal fishing.

On Tuesday, October 4th, left my place and patrolled the waters to Read's Bay and to Simcoe Island, thence to Horseshoe Island and found no infractions of the law.

On Monday, October 10th, patrolled from Wolfe Island to Big Bay and Button Bay, thence to Alexander Point. Found nothing wrong in that vicinity.

On Friday, October 14th, patrolled from Wolfe Island to Brown's Bay and went on to Barrett's Bay and from there to Simcoe Island and Horseshoe Island and found everything all right.

On Saturday, October 22nd, patrolled from my place to Big Bay and the foot of Wolfe Island, and found nothing wrong. The following day patrolled to Read's Bay and from there to Big Sand Bay, and from there went down the south side of Wolfe Island to Big Bay and to the foot of Wolfe Island.

On Sunday, October 30th, patrolled from my place to Big Bay by way of the foot of Wolfe Island. Found everything all right.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "HELEN" ON THE WATERS OF THE ST. LAWRENCE, DURING THE YEAR 1910.

On Sunday, April 10th, left Gananoque 5.30 a.m., went to Lansdowne Wharf, reaching there at 6.30 a.m. Left Lansdowne Wharf at 7.30 a.m. on the return trip to Gananoque. Stopped at Fly Creek to grapple for nets. Found and seized one set of hoop nets with one bag. Then came on to Lansdowne Bay and grappled there for nets. Found nothing. Returned to Gananoque at 11 a.m. On Monday, April 11th, owing to a cold contracted on Sunday the 10th and on Friday the 8th, when I was out on duty all night, I was unable to go out on Monday. On Tuesday, April 12th, I spent cleaning the boats and nets seized on Sunday and the week before. On Wednesday 13th, left Gananoque at 6 a.m. and patrolled the Islands. Returned to Gananoque at 5 p.m. On Thursday 14th, left Gananoque at 1 p.m. and reached Grass Creek at 2 p.m. Grappled in Grass Creek and vicinity until 3.30 p.m. Then returned to Big Bay and grappled for nets from 4 p.m. to 5.30. Returned to Gananoque at 6 p.m. Found no nets. On Friday, April 15th, left Gananoque at 6.45 a.m. and reached Fiddler's Elbow at 8 p.m. Grappled for nets among the island as far as Stave Island. Grappled for nets in Mollies Cut. Grappled for nets in Landon's Bay and found two sets of hoop nets in bag on each leader, all of which were seized and confiscated. Reached Gananoque with the "Helen" at 5 p.m. On Saturday, April 16th, the weather was unsuitable for going on the river, as a gale was blowing, and the day was spent cleaning the nets seized on Friday. On Sunday, April 17th, the weather was unsuitable for going on the river, it was blowing and raining.

On Monday, April 18th, I left Gananoque at 10 a.m. and patrolled the island. Arrived at Gananoque at 6.30 p.m. On Tuesday, April 19th, left Gananoque at 7 a.m., patrolled to Long Bridge Creek, grappled bays and returned to Gananoque at 6.30 p.m. On Wednesday, April 20th, left Gananoque at 7 a.m., patrolled the islands. Seized one night-line and returned to Gananoque at 5.30 p.m. On Thursday, April 21st, I left Gananoque at 7 a.m., patrolled the islands. Seized one night-line and returned to Gananoque at 1 p.m. On Friday, April 22nd, I left Gananoque at 7 a.m., patrolled the islands and went up the North Channel, then returned to Gananoque at 4.30 p.m. Saturday, April 23rd, left Gananoque at 7 a.m. and returned at 9 a.m. On Thursday when taking up the night-line, on which there was a sturgeon, the line of same got wound about the shaft of my boat, and so had to haul the boat out to take the line off.

On Sunday, April 24th, was raining and I did not go out. On Monday, April 25th, was also raining and I did not go out. On Tuesday, April 26th, I left Gananoque at 7.30 a.m., patrolled the river and islands and returned to Gananoque at 5 p.m. On Wednesday, April 27th, left Gananoque at 5.30 a.m., patrolled down the river and along the island and grappled the bays and creeks, then returned to Gananoque at 6.30 p.m. On April 28th and 29th I was sick, and unable to go out. On Saturday, April 30th, it was blowing a gale and I had to return. On May 1st and 2nd left Gananoque at 8 a.m., patrolled amongst the islands and returned to Gananoque at 5.30. On Tuesday, May 3rd, weather was unsuitable for going on the river as a gale was blowing. Wednesday, May 4th, I did not go out, as I had a case in the police court. M. Dilon made threats that he would shoot me the first time that he caught me on the river. I had him bound to keep the peace. On May 5th, 6th and 7th I left Gananoque and patrolled and

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grappled amongst the islands and Bay, then returned to Gananoque. On Saturday, May 8th, I left Gananoque at 3 a.m., patrolled down the river and the islands and up to the head of Howe Island, then returned to Gananoque at 4.30 p.m. On Monday, May 9th, the weather was unsuitable for going on the river, as a gale was blowing. On Tuesday, May 10th, I did not go out as I had to go to Kingston. Wednesday, May 11th, left Gananoque at 7 a.m., patrolled up the river, returned to Gananoque at 11.45 a.m. Did not go out in the afternoon as it was blowing hard. On Thursday, May 12th, I left Gananoque at 8 a.m., patrolled amongst the islands and returned to Gananoque. On Friday, May 13th, I left Gananoque at 7.30 a.m., patrolled up the north channel and grappled, then returned to Gananoque at 5 p.m. On Saturday, May 14th, left Gananoque at 6.30 a.m., patrolled down the river and amongst the islands and grappled Flat Island flats, and took a night-line, then returned to Gananoque On Sunday, May 15th, I did not go out as I was sick. On Monday, May 16th, left Gananoque at 7 a.m., patrolled up to the head of Howe Island and grappled along Bridge Creek, and the bays, returned to Gananoque. On Tuesday, May 17th, I left Gananoque at 8 a.m., patrolled amongst the islands and returned at 4.30 p.m. On Wednesday, May 18th, I did not go out as it was raining and blowing a gale. On Thursday, May 19th, left Gananoque at 7 a.m., patrolled the river and amongst the islands. Returned to Gananoque at 7.30 p.m. On Friday, May 20th, I left Gananoque at 7 a.m., patrolled amongst the islands, arrived at Gananoque at noon, but did not go out in the afternoon, as it was a half holiday. On Saturday, May 21st, I did not go out as I had to get my storage battery stored up at the Electric Light Works. On Sunday, May 22nd, I left Gananoque at 7 a.m., patrolled amongst the islands and returned to Gananoque at 6.30 p.m. On Monday, May 23rd, I left Gananoque at 7.30 a.m., patrolled the river down to Fiddler's Elbow, went up the South Channel and amongst the islands. Returned to Gananoque at 6 p.m. On Tuesday, May 24th, I left Gananoque at 8 a.m. and patrolled up the river to the head of Howe Island, then returned to Gananoque at 4.30 p.m. On Wednesday, May 25th, I left Gananoque at 7.30 a.m. and patrolled amongst the islands and returned at 5 p.m. On Thursday, May 26th, left Gananoque at 7 a.m. patrolled down the river and amongst the islands. Returned to Gananoque at 4 p.m. On Friday, May 27th, left Gananoque at 7 a.m., patrolled amongst the islands and grappled, then returned to Gananoque at 5 p.m. On Saturday, May 28th, left Gananoque at 7.30 a.m., patrolled up the river, returned to Gananoque 11.30 a.m. In the afternoon grappled the Gananoque River, and arrived home at 10 p.m. On Sunday, May 29th, I did not go out till 3 o'clock, as I had to go to a funeral; patrolled up the North Channel and arrived home at 7.30 p.m. On Monday, May 30th, I did not go out, as I was up all night watching some parties. I did not catch them, but I got their nets. It was raining and very dark or I would have caught the violators. On Tuesday, May 31st, I left Gananoque at 6.30 a.m., patrolled down the river, grappled amongst the islands and bay, returned to Gananoque at 5 p.m. Went out again at 6 p.m. and arrived home at 4 a.m.

On Wednesday, June 1st, I did not go out, as I was up all night before, and it was blowing a gale. On Thursday, June 2nd, I left Gananoque at 6.30 a.m., patrolled the river, returned to Gananoque at 11.30 a.m. I did not go out in the afternoon, as it was blowing a gale. On Friday, June 3rd, left Gananoque at 5.30 a.m : I patrolled to Long Bridge Creek, grappled the bays and creeks and returned to Gananoque at 5 p.m.

On Saturday, June 4th. I left Gananoque at 7 a.m.: patrolled amongst the islands, and returned to Gananoque at 4 p.m. On Sunday, June 5th, left Gananoque at 8 a.m., and patrolled the islands, then returned to Gananoque at 11.30 a.m., but did not go out in the afternoon, as it was raining. On Monday, June 6th, in port all day, as it was blowing too hard to go out. On Tuesday, June 7th, I left Gananoque at 7 a.m.: patrolled the river and grappled, and then returned to Gananoque at 5.30 p.m. On Wednesday, June 8th, left Gananoque at 7.30 a.m.; patrolled the river and grappled, and returned to Gananoque at 5 p.m. On Thursday, June 9th, I left Gananoque at 7 a.m.: patrolled the river and returned to Gananoque at 5.30 p.m. On Friday, June 10th, left Gananoque at 6 a.m.; patrolled and grappled Leak Island Channel for night lines, and returned to Gananoque at 5.30 p.m. On Saturday, June 11th, I left Gananoque at 5 a.m., and returned to Gananoque at 6 a.m., as is was raining and blowing a gale. On Sunday, June 12th, I left Gananoque at 4 a.m.: patrolled down the river and grappled; returned to Gananoque at 11 a.m.: did not go out in the afternoon, as it was blowing too hard. On Monday, June 13th, in port all day, as it was blowing a gale. On Tuesday, June 14th, I left Gananoque at 4 a.m.: patrolled down the river to Fiddler's Elbow, and grappled and took up one set of hoop nets, and returned to Gananoque at 3 p.m. On Wednesday, June 15th, left Gananoque at 5 a.m.: patrolled down the river and grappled and took up two gill nets and returned to Gananoque at 5 p.m. On Thursday, June 16th, left Gananoque at 7 a.m.; patrolled amongst the islands, and returned to Gananoque at 4 p.m. On Friday, June 17th, I left Gananoque at 2 p.m.; patrolled amongst the islands and returned to Gananoque at 8 p.m. On Saturday, June 18th, cleaning boat and nets in the forenoon, and left Gananoque at 1 p.m.; patrolled the river, and returned to Gananoque at 7.30 p.m. On Saturday, June 19th, in port till 1 p.m.: patrolled the river and returned to Gananoque at 7 p.m.

On Monday, June 20th, left Gananoque at 7 a.m.: patrolled down the river and grappled and took up one set of hoop nets, and returned to Gananoque at 3.30 p.m. On Tuesday, June 21st, was at port all day, as I had a case in the Police Court. I had Roy Sherman fined $25 and costs. On Wednesday, June 22nd, I left Gananoque at 5 a.m.: patrolled to Long Bridge Creek, and grappled the bays down to Landon Bay, and returned to Gananoque at 5.30 p.m. On Thursday, June 23rd, I left Gananoque at 6 a.m.: patrolled up the south side of Howe Island and returned at noon. Went out again at 6 p.m.: patrolled and returned to Gananoque at 8 p.m. On Friday, June 24th, was at port all day, as it was blowing a gale. Made some repairs to my boats. On Saturday, June 25th, I left Gananoque at 6 a.m.; patrolled down the river and grappled and seized a lot of gill nets; returned to Gananoque at 7.30 p.m.

On Sunday, June 26th, was at port all day. On Monday, June 27th, I left Gananoque at 9 a.m.; patrolled up the river and grappled: returned to Swiftwater Point and grappled and returned to Gananoque at 7 p.m. On Tuesday, June 28th, I left Gananoque at 6 a.m.: patrolled the river and grappled and returned to Gananoque at 5 p.m. On Wednesday, June 29th, left Gananoque at 7 a.m.; patrolled the river and grappled, then returned to Gananoque at 5 p.m. On Thursday, June 30th, left Gananoque at 7 a.m.; patrolled the river and grappled. Returned to Gananoque at 6 p.m. On Friday, July 1st, was at port all day, as I had to haul my boat out to get a gill net off the wheel. On Saturday, July 2nd, I left Gananoque at 7 a.m.; patrolled the river and returned to Gananoque at 6.30.

On July 3rd and 4th, was at port, as it was blowing a gale. On Tuesday,

July 5th, I left Gananoque at 5 a.m.; patrolled the river and grappled, and returned to Gananoque at 5.30. On Wednesday, July 6th, I left Gananoque at 5.30 a.m.; patrolled the river and grappled and took up one net, and returned to Gananoque at 7 p.m. On Thursday, July 7th, I left Gananoque at 6 a.m.; patrolled the river and grappled and returned to Gananoque at 11.30 a.m. I did not go out in the afternoon, as Capt. Hunter was here.

On Friday, July 8th, left Gananoque at 6.30 a.m.; patrolled the river and grappled and returned to Gananoque. On Saturday, July 9th, I left Gananoque at 7 a.m.; patrolled the river and grappled, and returned to Gananoque at 5 p.m. On Sunday, July 10th, was at port all day. On Monday, July 11th, was at port till 3 p.m., as it was blowing a gale; I left Gananoque at 3 p.m.; patrolled the river and returned to Gananoque at 7.30 p.m. On Tuesday, July 12th, left Gananoque at 7 a.m.; patrolled up the river and grappled, then returned to Gananoque at 5 p.m. On Wednesday, July 13th, left Gananoque at 2.30 p.m., and went down to Thomas Shipman's and took his launch, which I seized on June 25th, and towed it up to Gananoque. On Thursday, July 14th, was at port all day, as Thomas Shipman's trial came off. He was fined fifty dollars and costs. On Friday, July 15th, left Gananoque at 8 a.m.; patrolled; had to return to Gananoque as the pumps would not work, and had to have them repaired. On Saturday, July 16th, I left Gananoque at 8 a.m.; patrolled the river and returned to Gananoque at 5.30 p.m.

On Sunday, July 17th, remained at port all day. On Monday, July 18th, left Gananoque at 7 a.m.; patrolled the river, returned at 12 a.m. Did not go out in the afternoon, as Capt. Fleming was here, and I had to get him the nets. On Tuesday, July 19th, I left Gananoque at 7 a.m.; patrolled the river and returned to Gananoque at 6 p.m. On Wednesday, July 20th, left Gananoque at 1 a.m.; patrolled and grappled; returned to Gananoque at 7 a.m.; had to go to the telephone at 9 a.m., then went out in the afternoon and returned to Gananoque at 7 p.m. On Thursday, July 21st, left Gananoque at 8 a.m.; patrolled the river and returned to Gananoque at 5 p.m. On Friday, July 22nd, I left Gananoque at 7 a.m.; patrolled the river and returned to Gananoque at 5 p.m. On Saturday, July 23rd, left Gananoque at 6 a.m.; took the motor skiff to Kingston and patrolled the river home. Arrived at Gananoque at 2 p.m.; went out again at 3 p.m.; patrolled amongst the islands and returned to Gananoque at 7 p.m.

On Sunday, July 24th, left Gananoque at 1 p.m.; patrolled the river and returned to Gananoque at 7 p.m. On Monday, July 25th, left Gananoque at 7 a.m.; patrolled the river and returned to Gananoque at 12 a.m. Did not go out in the afternoon as it was blowing a gale. On Tuesday, July 26th, left Gananoque at 8 a.m.; patrolled and grappled the river and returned to Gananoque at 6 p.m. On Wednesday, July 27th, I left Gananoque at 7 a.m.; patrolled and grappled the river, and returned to Gananoque at 5 p.m. On Thursday, July 28th, left Gananoque at 7 a.m.; patrolled and grappled, and took up one gill net and returned to Gananoque. On Friday, July 29th, I left Gananoque at 7 a.m.; patrolled and grappled the river and returned to Gananoque at 6 p.m. On Saturday, July 30th, left Gananoque at 7 a.m.; patrolled and grappled the river. Was out all night and arrived at Gananoque at 7 a.m. On Sunday, July 31st, I left Gananoque at 12 a.m.; patrolled the river and returned to Gananoque at 6 p.m. On Monday, August 1st, I left Gananoque at 8 a.m.; patrolled the river and returned to Gananoque at 5 p.m. On Tuesday, August 2nd, left Gananoque at 6.30 a.m.; patrolled and grappled the Gananoque River, and returned at 5 p.m. On Wednesday, August 3rd, left Gananoque at 7 a.m.; patrolled the river and returned to Gan-

anoque at 6 p.m. On Thursday, August 4th, was at port all day as it was blowing a gale. On August the 5th, 6th and 7th, patrolled the Gananoque River. On August the 8th and 9th, we patrolled and grappled the Gananoque River. On Wednesday, August 10th, left Gananoque at 7 a.m.: patrolled the river and returned to Gananoque at noon, but did not go out in the afternoon, as it was blowing a gale. On Thursday, August 11th, I left Gananoque at 7 a.m.: patrolled the river and returned to Gananoque at 8 p.m. On Friday, August 12th, left Gananoque at 7 a.m.; patrolled the river and returned to Gananoque at noon. Did not go out in the afternoon, as I had to get the carburettor on the boat repaired. On August the 13th and 14th, we patrolled the Gananoque River. On August the 15th, 16th and 17th, we patrolled and grappled the Gananoque River. On Thursday, August 18th, was at port all day, as it was blowing a gale. On Friday, August 19th, left Gananoque at 5 a.m.: patrolled the river and seized a minnow seine, and returned to Gananoque at 3 p.m. On Saturday, August 20th, left Gananoque at 6 a.m.: patrolled and grappled the river; returned to Gananoque at 1 p.m. Went out again at 4 p.m. and returned at 8 p.m. On Sunday, August 21st, and Monday, 22nd, patrolled the Gananoque River. On Tuesday, August 23rd, left Gananoque at 1 p.m.; patrolled the river with the mate of the patrol boat, and returned to Gananoque at 6 p.m.

On Wednesday, August 24th, I left Gananoque at 7 a.m.: patrolled the river and arrived at Gananoque at 6 p.m. On Thursday, August 25th, left Gananoque at 6 a.m., patrolled amongst the islands, seized a skiff and arrested two men who had stolen a tent. Arrived at Gananoque at 11 a.m. On Friday, August 26th, I did not go out in the forenoon, as I had to attend Police Court. Went out in the afternoon, and arrived at Gananoque at 7 p.m.

On Saturday, August 27th, left Gananoque at 7 a.m.; patrolled the river and grappled. Returned to Gananoque at 5 p.m. On Sunday, August 28th, was at port all day. On Monday, August 29th, left Gananoque at 6.30 a.m.; patrolled and grappled the river, and returned to Gananoque at 7.30 p.m. On Tuesday, August 30th, left Gananoque at 8 a.m.; patrolled and grappled the river and returned to Gananoque at 6 p.m. On Wednesday, August 31st, was at port all day, as it was raining. I was looking up guides for Mr. Simpson, as he wanted twenty guides, and I had to put some on for the day without licenses.

On Thursday, September 1st, I did not leave till 9 a.m., as I had to get some guides for Mr. Simpson. Arrived at Gananoque at 5.30 p.m. On Friday, September 2nd, left Gananoque at 7 a.m.; patrolled and grappled the river, and returned to Gananoque at 6.30 p.m. On Saturday, September 3rd, was at port all day, as it was raining and blowing. On September 4th, left Gananoque at noon, patrolled the river, and returned to Gananoque at 7 p.m. On Monday, September 5th, left Gananoque at 7 a.m., patrolled the river, returned to Gananoque at noon. Did not go out in the afternoon, as it was raining. On Tuesday, September 6th, left Gananoque at 7 a.m., patrolled, but had to return on account of storm. On Wednesday, September 7th, left Gananoque at 6 a.m., patrolled and grappled the river. Seized four sets of gill nets, and returned to Gananoque at 6 p.m. On Thursday, September 8th, left Gananoque at 5.30 a.m., patrolled and grappled the river, and returned to Gananoque at 5.30 p.m. On Friday, September 9th, I left Gananoque at 3 a.m., patrolled up the river, and returned to Gananoque at 1.30 p.m. On Saturday, September 10th, left Gananoque at 4 a.m., patrolled and grappled the river, and returned to Gananoque at 4 p.m. Seized four sets of gill nets.

On Sunday, September 11th, left Gananoque at 9 a.m., patrolled the river,

and returned to Gananoque at 7 p.m. On Monday, September 12th, left Gananoque at 3 a.m., patrolled and grappled. Returned to Gananoque at 10 a.m. Went out again at 2 p.m., and returned to Gananoque at 9 p.m. On Tuesday, September 13th, left Gananoque at 7 a.m., patrolled and grappled the river, and returned to Gananoque at 6 p.m. On Wednesday, September 14th, left Gananoque at 7 a.m., patrolled and grappled the river. Was out all night and arrived at Gananoque at 5 a.m. On September 15th, 16th and 17th, we patrolled and grappled the Gananoque River. On Sunday, September 18th, was at port all day, as it was raining. The forenoon of Monday, September 19th, was spent in cleaning boat. Left Gananoque at noon, patrolled and grappled the river, and returned at 7 p.m. September the 20th and 21st was spent patrolling and grappling the Gananoque River. On Thursday, September 22nd, left Gananoque at 8.30 a.m., patrolled and grappled the river, and took up nine gill nets, and returned to Gananoque at 9 p.m.

On Friday, September 23rd, left Gananoque at 6 a.m., patrolled and grappled the river, and returned to Gananoque at 5 p.m. On September 24th and 25th was at port drying nets and cleaning boat. On Monday, September 26th, left Gananoque at 1 a.m., patrolled to the head of Howe Island, lay in the water to watch some parties, but they did not show up. Returned to Gananoque at 6.30 p.m. On Tuesday, September 27th, left Gananoque at 6 a.m., patrolled and grappled the river, and returned to Gananoque. On Wednesday, September 28th, owing to sickness, had to remain at port all day. On September 29th and 30th patrolled and grappled the Gananoque River.

On Saturday, October 1st, left Gananoque at 8 a.m., patrolled the river to Kingston, and returned to Gananoque at 5.30 p.m. On Sunday, October 2nd, left Gananoque at 8 a.m., patrolled the river, and returned to Gananoque at 6 p.m. On Monday, October 3rd, left Gananoque at 4 p.m., patrolled and lay in the water, watching for some parties, but they did not show up. Returned to Gananoque at 6 p.m. On Tuesday, October 4th, was at port all day, as it was blowing a gale. On Wednesday, October 5th, left Gananoque at 7 a.m., patrolled and grappled, and returned to Gananoque. On Thursday, October 6th, was at port all day, as it was raining. On October 7th and 8th, patrolled and grappled the Gananoque River. On Sunday, October 9th, was at port all day. From Monday, October 10th, to Monday, October 17th, we patrolled and grappled the Gananoque River. On Tuesday, October 18th, left Gananoque at 5 a.m., and went up the river to Marble Rick, and grappled back to Gananoque, arriving there at 6 p.m. On Wednesday, October 19th, left Gananoque at 3 a.m., patrolled down the river, and lay in water, watching for some parties, but they did not show up. Returned to Gananoque at noon.

On Thursday, October 20th, left Gananoque at 6 a.m., patrolled down the river to Fiddlers' Elbow, and up to Landon's Bay, grappled, and took up one set of hoop nets. Returned to Gananoque at 5 p.m. On Friday, October 21st, left Gananoque at 7 a.m., patrolled and grappled, and took up one set of hoop nets. Returned to Gananoque at 7 p.m.

On Saturday, October 22nd, was at port all day, as it was blowing and raining. On Sunday, October 23rd, left Gananoque at 7 a.m., patrolled the river, and returned to Gananoque at 5 p.m. On Monday, October 24th, left Gananoque at 6 a.m., patrolled and grappled the river, and returned to Gananoque at 6 p.m. On Tuesday, October 25th, was at port all day, as it was raining. On Wednesday, October 26th, left Gananoque at 1 a.m., patrolled and grappled, and returned to Gananoque at 6 p.m.

On Thursday, October 27th, left Gananoque at 5 a.m., patrolled and grappled. Was out all night, as my boat went ashore in the storm in the afternoon. On Friday, October 28th, it took me all day to get my boat off. I had to get five men to help me, with ropes, chains and blocks. On Saturday, October 29th, left Gananoque at 6 a.m., patrolled the river, and returned to Gananoque at 1 p.m. On Sunday, October 30th, was at port all day. On Monday, October 31st, left Gananoque at 7 a.m., patrolled the river, and returned to Gananoque at 6 p.m.

Logged 5,984 miles.

REPORT OF THE WORK PERFORMED BY THE LAUNCH "MERMAID," ON THE RIDEAU WATERS DURING THE YEAR 1910.

Started out from Jones Falls at 10 a.m. on Tuesday, 10th May, calling first at Seeley's Bay, where we stayed one hour, afterwards going on to Cranberry and Dog Lakes, which we thoroughly patrolled, and back to Jones Falls at five o'clock. Left next morning at eight, first locking the "Mermaid" through the locks and going northwards on the Rideau Canal, calling first at Chaffey's Lock, where we stayed one hour. Afterwards went on to Newboro, where we had dinner and remained three hours, then on to Westport, where we put up for the night. Started the following morning at nine for Portland, then down the Big Rideau Lake to Rideau Ferry, remaining there over night. Left for Portland Friday morning at 8.30, then on to Newboro and Jones Falls for the night.

On Monday, the 16th May, patrolled to Seeley's Bay and returned to Jones Falls. Next day visited Brewers Mills, where we met Overseer J. H. Phillips with his new patrol boat, "Ella C," and accompanied him back to Jones Falls, where we arrived at noon. On Wednesday patrolled to Bedford Mills, passing through Jones Falls, Foster's and Chaffey's Locks, and Lakes Sand and Opinicon, also Indian, Benson and Mosquito, Mud and Loon Lakes. The following day patrolled Rideau Canal, from Jones Falls to Brewers Mills, and in the afternoon patrolled Cranberry and Dog Lakes, back west as far as Battersea, and home for the night. On Saturday went to Crow Lake with horse and buggy to look over the lake.

On Monday, 23rd May, started at 8 o'clock to patrol Sand and Opinicon Lakes to Chaffey's Locks, then on through Indian, Clear and Mud Lakes to Newboro. In the afternoon went to Bedford Mills, and returned through Benson and Mosquito Lakes to Chaffey's Lock and back to Jones Falls for the night. Left again on Wednesday at eight, and patrolled to the head of Opinicon Lake and Sand Lake; and on Friday went to Cranberry and Dog Lakes, patrolling them thoroughly, and also Whitefish Lake. On Saturday made a patrol of the different lakes to Newboro, and returned to Jones Falls.

On Wednesday, June 1st, patrolled the different lakes from Jones Falls and Kingston, and early the following morning we were up and on the move, and after about two hours spent in interviewing parties interested in the fisheries, set out on the back trip, making frequent calls along the way. Next day patrolled Whitefish Lake and River as far down the river as the Government dam; and on Saturday patrolled to Bedford Mills, going through the different lakes on this route. After giving Devil Lake considerable attention, we left the Mills and patrolled as far as Newboro and back to Jones Falls.

On Monday, June 6th, patrolled Whitefish and Cranberry Lakes, and back by Seeley's Bay to Jones Falls. Next morning went with horse and buggy to

Hart Lake to investigate a complaint of bass fishing in that lake. There had been a party fishing there, but we could not find out whether they took out bass or not. Went to Elgin on Wednesday with horse and buggy on fishery business. On Thursday patrolled Sand and Opinicon Lakes, as far as head of Lake Opinicon and return, and next day patrolled the different lakes to Bedford Mills, which occupied the whole day. On Saturday patrolled to Brewers Mills, passing through Dog Lake as far as Battersea.

On Monday, 13th June, went through Sand and Opinicon Lakes to Chaffey's Locks, staying there all day and returning to Jones Falls at night. The following day worked with assistant installing an auto top on the "Mermaid," making an enclosed cabin. On Wednesday patrolled the lakes to Brewers Mills, remaining at Nicholl's wharf, Dog Lake, for the night, and for the following three days continued our patrol of the different lakes.

On Monday, June 20th, started out from Jones Falls, and spent the week among the different lakes. On Tuesday, the 28th, went to Kingston, making calls on the way, and spent the forenoon of the following day in Kingston getting some repairs and improvements made on the "Mermaid." Left Kingston at 2 p.m., arriving at Jones Falls at 8 p.m. Next day went to Chaffey's Locks to straighten up fishery business for the month of June, and were there the whole day. Went with a horse and buggy to Elgin on Friday on fishery business. Next day patrolled the Rideau Canal waters to Brewers Mills, Cranberry and Dog Lakes, and back to Jones Falls.

On Monday, July 4th, patrolled the different lakes to Bedford Mills, and after looking this place over and going on foot up the shore of Devil Lake a mile and back, ran down to Newboro for the night. Next day went through Lakes Benson, Mosquito, and Indian, down to Chaffey's Lock, afterwards went through Opinicon and Sand Lakes to Jones Falls, and on Wednesday through Whitefish, Cranberry and Dog Lakes, running in to Sucker Brook, Pierce's Bay and Seeley's Bay, and back to Jones Falls. Spent the following week patrolling the different lakes, and on Wednesday, July 13th, went with horse and buggy to Elgin on fishery business, and in the afternoon patrolled to Seeley's Bay and return. Next day went through Sand and Opinicon Lakes to Chaffey's Locks, remaining till night on fishery business. On Friday morning started to investigate a complaint of a party of Americans living on a house-boat on the River Styx, in the Rideau Canal. It was said they were shooting ducks, but when we got to the place abovementioned, they had gone about six hours. We followed them to Kingston, thinking they would stop there, but they went right on to Alexandra Bay. Started early next morning and patrolled back to Jones Falls, taking all day to do it, calling at all places of interest on the way.

Left Jones Falls on Monday, 18th July, and patrolled the various lakes to Bedford Mills, and the following day hired a skiff and patrolled Devil Lake until noon. Found a number of Americans camped there, all of them having been furnished with angling permits. Spent the afternoon on the different lakes, calling at Newboro and Chaffey's Lock on way back to Jones Falls. The rest of the week was spent on the different lakes.

On Monday, July 25th, went to Kingston to look after a party of Americans said to have been shooting ducks on the River Styx, and the day following went to Collins Bay, where we expected to find the American party, but found they had left for Alexandra Bay, so we returned to Kingston for the night. Called at several camps on Wednesday on the banks of the canal, and spent the remainder of the week patrolling the different lakes.

The greater part of the month of August was taken up patrolling the lakes between Jones Falls and Kingston. On Wednesday, the 24th, on our return from Brewers Mills, we broke the pump of our engine, and had to get the "Mermaid" towed into Seeley's Bay for repairs. Spent the next day helping the machinist repair the engine, which took all day. The following day went to Westport, procured a horse and buggy and drove to the village of Burridge to prosecute a party for the shooting of an eagle, but he was not at home, so nothing was accomplished. However, I was more fortunate next day when I went there again, taking Overseer Clark with me; the offender being at home, we had him up before a J.P. and fined.

The next ten days or more we visited Chaffey's Lock, Morton, Elgin, Brewer's Mills, and many other places, and on Thursday, 8th September, went to Crow Lake with a horse and buggy to look after duck hunters reported to be shooting ducks. I hired a rowboat, and with the help of my assistant, patrolled all of this lake with the rowboat for four hours. On Friday patrolled the Rideau waters to Brewers Mills, going back into Dog Lake in the afternoon. Stopped at Nichol's wharf in Dog Lake over night to watch for duck hunters. Was out on the lake early next morning, as it was reported that there were hunters around, but I heard no shooting. Left at 8 a.m. for Brewers Mills, locking through and running down to the River Styx at noon. Overseer Phillips, with the "Ella C." came along on his way to Kingston, and we accompanied him to that place. On Sunday morning was up early, and assisted by Deputy Warden Best we left at 4 a.m. with a rowboat on a patrol of the waters between Kingston and Kingston Mills. Patrolled for five hours thinking to catch some one of the many duck poachers reported to be operating on these waters, but we saw nothing wrong. Went through the lakes on Monday and Tuesday, and on Wednesday drove to Hart Lake and remained all day looking for duck hunters, but found none. The remainder of September was spent as usual patrolling the different lakes looking after poachers.

On Tuesday, October 4th, on our way homewards from the River Styx, we met Overseer Phillips with the "Ella C," which was disabled by the loss of her propeller wheel. Mr. Phillips was bound for Kingston, and as the wind was blowing very hard, we undertook to tow the "Ella C" to Kingston, but after going about five miles the wind blew the "Ella C." on to a mud bank, and she stuck so fast the "Mermaid" could not pull her off, so we took Mr. Phillips into Kingston. Next morning Mr. Phillips got Capt. Fleming to accompany us down to the "Ella C," to pull her off the mud bank, which was soon done, and then they accompanied us to Jones Falls for the night. Next morning we took Mr. Phillips and his man home to Smith's Falls, calling at Newboro and Portland on our way in the interest of the fisheries. Returned home on Friday, and on Saturday drove to Elgin to see some parties on fishery business.

On Monday, October 10th, I drove to Morton post office in the forenoon, and in the afternoon patrolled Sand and Opinicon Lakes to Chaffey's Lock, and returned to Jones Falls. Next morning patrolled the Canal waters southwards from Jones Falls, passing through the different lakes to Kingston. At Washburn stopped and grappled up the propeller wheel lost the week before off the "Ella C," which we took to Kingston and remained for the night. The following day we ran to the River Styx, and did a lot of patrol work with the rowboat, and stayed over night. Went out again with the rowboat in the morning, working until noon, and then went back to Jones Falls. On Friday drove to Elgin on fishery business, and on Saturday went to Whitefish Lake, Cranberry Lake and Seeley's Bay, and back home at night. The following Monday we visited the Big Rideau Lake, re-

mained over night, and tied the "Mermaid" up at Leggett's Wharf. We took the rowboat and used the grapple hook, but found nothing. Next day visited Overseer Phillips' camps on Petty's Point at the foot of the lake. At dark we manned two rowboats; Warden Best and myself in one, and Overseer Phillips and my son in the other, and grapped the whole night until sunrise; seized two large gill nets, and got the names of four offenders. Laid complaints against these four men next morning, and in the afternoon went with Capt. Fleming (who had come after us with his launch), to the River Styx to assist in making a seizure of hoop nets. Remained at Newboro over night, and next day continued our trip to the River Styx, reaching there in the evening, having been kept back for three hours by high wind. Started early in the morning and ran as far as the High Banks, where we took the rowboats and set out to look for a party who was fishing illegally, whom we found with several others, and seized his nets. There was a heavy storm raging on Saturday, so we could not start until afternoon, and being heavily loaded had to go slowly. Unloaded the nets at Newboro, and stayed there over night. Returned to Jones Falls on Sunday, patrolling the different lakes on the way.

The remainder of the month was spent in the usual way (patrolling the lakes, rounding up poachers, etc., etc.), and on Monday, October 31st, finished my patrol work with the "Mermaid" for the season.

Logged 3,473 miles.

REPORT OF THE WORK PERFORMED BY THE PATROL BOAT "MEENAGHA" ON THE MUSKOKA LAKES DURING THE YEAR 1910.

On Tuesday, June 21st, started from Milford Bay, patrolling the shore and islands, calling at the Hutton House, and going on to Port Carling. Next day visited Windermere, Rosseau, Maplehurst and Juddhaven, and stopped at the Royal Muskoka, going from there to Port Carling on Thursday, then to Walker's Point, Montcalm, Brydon's Bay, and on to Gravenhurst. Captured a party with a quantity of fish illegally caught. Next day visited Shanty Bay and around the Hock Rock, and back to Gravenhurst. On Saturday went to Big Island, thence to the mouth of the River St. Elmo, Monk shore to Gravenhurst.

Spent the first three days of the following week visiting the following places: Beaumaris, Port Carling, Ferndale, Port Sandfield, Elgin House, Hammil's Point, Barnesdale, Gordon Bay, Port Carling, Stanley House, Waskada, Mortimer's Point, and Bala. On Thursday called at American House on way to Beaumaris. Went to Bracebridge and laid information against the party who was caught illegally fishing the previous week. Served summons on him next day at Hock Rock. Went to Stephen's Bay and back to Gravenhurst. Spent Saturday posting notices on Gull Lake, and did some patrolling.

On Monday, July 4th, visited St. Elmo, then went to Milford Bay, Hutton House, and to Beaumaris for the night, leaving next day for Bracebridge to give evidence against the party who was apprehended for fishing illegally, returning to Port Carling via Big Island. The rest of the week was spent in visiting Windermere, Wascada, Rossmoyne, Rosseau, Maplehurst, Skeleton Bay, Royal Muskoka, Port Carling, Ferndale, Woodington, Minnett's, Paignton, Morinus, The Bluffs, Ross Clair, Mortimer's Point, East Bay, Montcalm, and Gravenhurst. Remained at Gravenhurst over Sunday and Monday, as no gasoline to be had. Spent the

time putting up game and fishery notices around the town. On Tuesday left for Montcalm. Walker's Point, Milford Bay, Hutton House, and Port Carling; and on Wednesday went to Ferndale, Port Sandfield, Pinelands, Elgin House, Hammill's Point and Barnesdale. Visited Gordon Bay on Thursday, also Port Cockburn, Stanley House, Gregory, Woodington, Clevelands, Paignton House, Morinus, The Bluffs, and the Royal Muskoka; and next day visited Judd's, Maplehurst, Rosseau, Windermere and Port Carling; and on Saturday, Beaumaris, St. Elmo, Big Bay and Gravenhurst.

On Monday, July 18th, went to Hock Rock, and from there to Shanty Bay, patrolling the south end of Lake Muskoka, and to Montcalm for the night. Patrolled to Long Point on Tuesday, thence to East Bay, Mortimer's Point, Torrance, and Bala, and next day to Camp Sutton. American House, Milford Bay, Hutton House and Port Carling. Thursday was spent patrolling to Ferndale, Gregory, Woodington, Morinus, Minnett's, Paignton House, The Bluffs, and the Royal Muskoka. Engine giving trouble. On Friday, went to Juddhaven. Windermere. Waskada. Engine giving so much trouble, took the "Meenagha" to repair shop to have repairs effected. Left her in the hands of the machinist until Tuesday, and in the meantime went to Gravenhurst by steamer on Saturday, and on Monday to Port Carling. On Tuesday visited Windermere and Rosseau Falls, thence to Rosseau, Rossmoyne, Maplehurst, Juddhaven, Royal Muskoka; thence on Wednesday to Morinus, Paignton House, Minnett's, Woodington, Gregory, Port Sandfield, Pinelands and Elgin House. Next day to Stanley House, Port Cockburn, Gordon Bay, Barnesdale, Stanley Brae, and Port Carling; and on Friday to Rossclaire, Mortimer's Point, American House, Dudley, Bala, Bala Port, and Port Carling. On Saturday visited Hutton House, Milford Bay, Beaumaris, Big Island, Montcalm and Gravenhurst, at which latter place we lay at anchor over Sunday and part of Monday. Then went to Gull Lake, Pinedale, and Silver Lake. Left Gravenhurst on Tuesday and patrolled east side of Lake Muskoka to St. Elmo, then to Beaumaris, Hutton House and Port Carling. On Wednesday called at Ferndale and Gregory, going up Joseph River to Craigielea and Stanley House, where we lay at anchor owing to bad weather. It was the worst storm of the season—seas too heavy for yacht to take chances. Storm still raging next morning, but in the afternoon left for Woodington, Minnett's, Paignton House, Morinus and Royal Muskoka; and on Saturday visited Waskada, Windermere, Port Carling and Gravenhurst.

On Monday, 8th August, patrolled the west side of Muskoka Lake, and on Tuesday the east side. On Wednesday went to Port Carling, Beaumaris, back to Port Carling, and to Waskada; on Thursday to Royal Muskoka, Windermere, Rosseau, Maplehurst, and Rostrevor; on Friday to Morinus, Port Sandfield, Port Carling and Gravenhurst; and on Saturday to Leg Lake, and remained there over Sunday.

Patrolled Gull Lake and Silver Lake on Monday, and visited Pinedale and Drury's; from thence to Pine Lake on Tuesday via Sucker Creek to Gravenhurst. On Wednesday visited Hock Rock, Steven's Bay, mouth of Muskoka River and up the river to Big Island and Gowan's Island; on Thursday visited Mortimer's Point, East Bay, Walker's Point, and Shanty Bay; on Friday Hutton House, Milford Bay, Rossclaire, and Port Carling, and from there on Saturday to Ferndale, Woodington, Port Sandfield, Elgin House, Pinelands, Port Carling and Gravenhurst.

On Monday patrolled to Beaumaris, Torrance, Bala and American House, leaving on Tuesday for Rossclaire, Hutton House, Port Carling and Windermere. On Wednesday went to Skeleton Bay, Rosseau Falls, Rosseau, Maplehurst, Rostre-

vor, Juddhaven, Royal Muskoka and Port Carling. Left on Thursday for Ferndale, Pinelands, Port Sandfield, Hammill's Point and Gregory; on Friday visited Woodington, Minnett's, Paignton House, Morinus and the Bluffs; and on Saturday left the Bluffs for the Royal Muskoka, Waskada, Port Carling and Gravenhurst.

Spent Monday, 29th August, patrolling Gull Lake, Pinedale and Silver Lake. Left Gravenhurst on Tuesday for Shanty Bay, calling at Montcalm, Walker's Point and Port Carling; next day called at Port Sandfield, Pinelands, Elgin House, Redwood, Hammill's Point, Hemlock Point and Port Sandfield; on Thursday visited Gregory, Craigielea, Woodington, Minnett's, Paignton House, Morinus, The Bluffs, and the Royal Muskoka; on Friday went to Rosseau Falls, Rosseau, Maplehurst, Juddhaven, Windermere, and Port Carling; and on Saturday to Rossclaire, Mortimer's and Gravenhurst, remaining at the latter place until Tuesday owing to rough weather.

Left Gravenhurst on Tuesday, 6th September, calling at Beaumaris, Hutton House, Milford Bay and Port Carling. Next day called at Windermere, Rosseau Falls, Rosseau, Maplehurst, Juddhaven and the Royal Muskoka. On Thursday visited Morinus, Paignton House, Minnett's, Woodington, Port Sandfield, Elgin House and Hammill's Point, leaving on Friday for Stanley House, Port Cockburn, Gordon Bay, Barnesdale and Port Carling, and on Saturday for Rossclaire, Big Island, St. Elmo and Gravenhurst.

Patrolled the east side of Lake Muskoka on Monday from Gravenhurst to mouth of Muskoka River, and back to Gravenhurst. Next day patrolled to Shanty Bay, Island F, and along west shore to Montcalm; the following day to Mortimer's Point, Bala, and Beaumaris, where the "Meenagha" was laid up for the season, September 14th.

Logged 1,321 miles.

REPORT OF WORK PERFORMED BY PATROL BOAT "WANDERER" ON THE WATERS OF LAKE NIPISSING DURING THE YEAR 1910.

On May 14th, left North Bay for South-East Bay, patrolled all the fishing grounds in that vicinity. No sign of any nets. On May 14th, left North Bay for the Little Sturgeon River. No indication of illegal fishing. On May 25th, I left for Nipissing, as per instruction from Department.

On June 11th, I left for Callandar to investigate complaint of illegal fishing, no evidence to go ahead with the case. On June 15th, left for South-East Bay, patrolled along east shore, found no nets. Sold two angling permits. On May 18th, left for Goose Islands, patrolled all around the group. No signs of illegal fishing. On July 4th, left for South-East Bay, patrolled along south shore, and sold two permits. July 20th, left for Cross Point to investigate complaint re net fishing. Found two small nets at the mouth of Back River, both nets belonged to Indians. On July 22nd, left for Fish Bay and South River. Visited a number of campers. All were residents. No complaints of any illegal work. On July 28th left for the French River. On July 29th left Frank's Bay, patrolled around Sundy Island, found very few campers. All were supplied with permits.

On July 30th, left Frank's Bay. Went to Partridge Island. Sold three angling permits. On August 3rd, left Frank's Bay, patrolled to Five-Mile Bay. Visited a number of campers. All were supplied with licenses. On August 4th, patrolled to Satchel's Bay. Visited several fishing parties. All had permits.

On August 5th, patrolled to Wigwam Point, found a number fishing. All were supplied with permits. On August 8th, patrolled to Chaudiere Falls. Sold three angling permits. On August 12th, patrolled to Big Chaudiere Falls. Sold five angling permits. On August 13th, patrolled to Frank's Bay, sold five guide licenses. On August 17th, left Frank's Bay for Chaudiere Falls, left launch and took canoe for the lower French. On August 20th, left Chaudiere for Frank's Bay. Sold two guide licenses. On August 25th, left Frank's Bay for the head of Sundy Island, to investigate complaint re net fishing. Found one small net belonging to some Indians. On August 27th, left Frank's Bay for North Bay. On August 29th, left for Fish Bay and South River. All the campers in that vicinity were Indians. On September 1st I patrolled to Lavaes River. No signs of illegal fishing. On September 3rd, patrolled to Manitou Islands. Found no nets. Sold two guide's licenses.

On September 6th, left for South-East Bay. No signs of net fishing; sold two angling permits. September 29th, left for Callandar, found two Americans fishing without license. Both were fined five dollars and costs.

On October 11th, patrolled the South-East Bay, and along the south shore; could not locate any nets.

The "Meenagha."

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the industry during

Number.	District.	Fishing material.									
		Tugs or Vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake of the Woods and Rainy River:			$			$				$
1	Lake of the Woods	2	150	5,100	6	17	3,655	38	.....	20,000	.....
2	Shoal, One Man's and Lost Lake	.....	.....	.....	.....	3	875	7	.....	6,000	.....
3	Wabigoon and Manitakie	1	25	1,500	2	4	925	9	.....	8,000	.....
4	Vermillion and Clearwater	.....	.....	.....	.....	2	300	7	.....	6,000	.....
5	Eagle, Pelican and Namaken	.....	.....	.....	.....	2	350	5	.....	4,000	.....
6	Sandy, Abraham and Long	.....	.....	.....	.....	3	525	6	.....	6,000	.....
7	Rainy, Kariskong and Orang Outang	.....	.....	.....	.....	9	670	21	.....	20,000	.....
8	Crow, Dogtooth and Indian	.....	.....	.....	.....	1	350	3	.....	6,000	.....
		3	175	$6,600	8	41	$7,650	96	.....	76,000	.....

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Lake of the Woods and Rainy River.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Lake of the Woods	.....	.....	.....	458,077	.....	.....	156,512	235,408
2	Shoal, One Man's and Lost Lake	.....	.....	.....	33,700	.....	.....	12,410	25,226
3	Wabigoon and Minitakie	.....	.....	.....	69,145	.....	5,175	18,745	31,790
4	Vermillion and Clearwater	.....	.....	.....	20,792	.....	200	12,555	12,276
5	Eagle, Pelican and Namaken	.....	.....	.....	2,800	.....	250	1,600	450
6	Sandy, Abraham and Long	.....	.....	.....	9,525	.....	825	3,590	4,058
7	Rainy, Kariskong and Orang Outang	.....	.....	.....	91,599	.....	1,000	51,116	46,143
8	Crow, Dogtooth and Indian	.....	.....	.....	12,090	.....	2,950	10,301	12,842
	Totals	.....	.....	.....	697,728	.....	10,400	266,829	368,193
	Values	.....	.....	.....	$ c. 69,772 80	.....	$ c. 1,040 00	$ c. 21,346 32	$ c. 36,819 30

FISHERIES.

quantity and value of all fishing materials and other fixtures employed in the fishing the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night lines.		Spears.		Freezers and ice houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	14	3,000	6	450	....	.....	.....	.....	....	.....	4	3,500	4	2,000
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	1	500	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	2	1,600	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	2	1,000	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	3	350	3	125
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	14	$3,000	6	450	....	.....	.....	.....	....	.....	12	$6,950	7	$2,125

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
52,385	.....	.....	26,170	20,400	17,250	1,100	200	.....	.....	.....	95,021 91
.....	.....	.....	870	.....	.....	.....	.....	.....	.....	.....	6,937 60
.....	.....	100	4,500	.....	9,000	.....	.....	.....	.....	.....	12,835 60
.....	.....	.....	2,800	.....	1,200	.....	.....	.....	.....	.....	4,559 20
.....	.....	.....	1,260	.....	.....	.....	.....	.....	.....	.....	553 60
.....	.....	.....	150	.....	.....	.....	.....	.....	.....	.....	1,737 00
2,400	.....	.....	30,000	.....	35,163	160	.....	.....	.....	.....	22,011 63
.....	.....	.....	700	.....	.....	.....	.....	.....	.....	.....	3,654 28
54,785	.....	100	66,450	20,400	62,613	1,260	200	.....	.....	.....	147,340 82
$ c.		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.				$ c.
8,217 75	.....	5 00	3,987 00	1,632 00	3,130 65	1,260 00	130 00	.....	.....	.....	147,340 82

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats fishing industry.

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake Superior.			$			$				$
1	Thunder Bay	26	134	38,550	53	26	1,395	36	.....	572,000	27,100
2	Point Mamainse	.....	.....	.....	.....	4	145	8	.....	21,000	1,500
3	Gross Cap	.....	.....	.....	.....	7	495	13	.....	33,400	940
4	Michipicoten Island	3	82	15,100	17	4	285	7	.....	168,000	7,680
5	Gargantua	1	48	7,500	7	1	45	2	.....	69,000	3,300
6	Goulais Bay	.....	.....	.....	.....	1	40	2	.....	12,000	175
7	Batchewana Bay	.....	.....	.....	.....	5	315	10	.....	27,500	875
	Totals	30	264	$61,150	77	48	$2,720	78	.....	902,900	$41,570

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Superior.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Thunder Bay	.....	129,000	.....	241,506	8,347	863,816	57,069	57,609
2	Point Mamainse	.....	.....	.....	17,000	.....	40,800	.....	.....
3	Gros Cap	.....	2,000	.....	20,125	.....	14,650	.....	.....
4	Michipicoten Island	.....	.....	.....	79,405	231	183,810	.....	150
5	Gargantua	.....	.....	.....	20,950	125	152,635	.....	.....
6	Goulais Bay	.....	.....	.....	1,000	.....	1,500	.....	.....
7	Batchewana Bay	.....	.....	18	86,300	69	144,300	.....	.....
	Totals	.....	131,000	18	466,286	8,772	1,401,511	57,069	57,759
	Values	.....	$ c. 6,550 00	$ c. 180 00	$ c. 46,628 60	$ c. 87,720 00	$ c. 140,151 10	$ c. 4,565 52	$ c. 5,775 90

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound Nets.		Hoop Nets.		Dip Nets.		N ght ines.		Spears.		Freezers and Ice Houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	.	alue.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
			34	6,700									4	2,200	2	400
																3,000
															1	500
			34	$6,700									4	$2,200	3	$3,900

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
1,240			6,050								211,327 62
											5,780 00
											3,577 50
			950								28,703 50
											18,608 50
											250 00
					3,900						24,125 00
1,240			7,000		3,900						292,372 12
$ c. 186 00			$ c. 420 00		$ c. 195 00						$ c. 292,372 12

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake Huron (North Channel).			$			$				$
1	Thessalon	1	3	600	2	6	680	9	.....	83,000	1,010
2	Cutler Bay and Sagamuck	1	7	3,000	.....	1	75	1	.....	6,000	200
3	Marksville	.....	.....	.....	.....	1	30	1	.....	6,000	125
4	Mississauga	4	76	23,000	18	1	500	3	.....	120,000	10,800
5	Haywood Island	.....	.....	.....	.....	1	150	2	.....	6,000	300
6	Laloche and Manitowaning	.....	.....	.....	.....	2	450	6	.....	6,000	300
7	Kagawong	2	.....	5	.....	1	.....	3	.....	60,000	3,500
8	Darch and Innis Islands	.....	.....	.....	.....	1	50	2	.....	.....	.....
9	Meldrum Bay	.....	.....	.....	.....	1	100	2	.....	6,000	300
10	Cockburn Island	1	21	.....	6	3	750	4	.....	38,000	1,600
11	Fitzwilliam Island	.....	.....	.....	.....	9	1,295	18	.....	48,000	2,200
12	Squaw Island	5	65	17,000	15	1	.....	.....	.....	300,000	10,350
13	Duck Island	1	15	6,000	6	7	1,950	14	.....	148,000	12,400
14	South Bay Mouth	1	10	3,000	5	7	775	14	.....	108,000	5,950
15	Killarney	1	10	3,000	.....	10	1,550	18	.....	42,000	2,100
16	Providence Bay	1	10	2,000	.....	1	300	2	.....	72,000	4,100
17	Rabbit and Strawberry Islands	.....	.....	.....	.....	1	150	3	.....	9,000	300
18	Johns and Lonely Islands	.....	.....	.....	.....	4	825	9	.....	24,000	1,200
19	Sheguiandah and Frazer Bay	1	.....	700	6	3	100	.....	.....	.....	.....
20	Wekwemikong and Gore Bay	1	10	2,000	.....	2	175	4	.....	12,000	600
	Totals	20	227	$60,305	58	63	$9,905	115	.....	1,094,000	$58,335

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Huron (North Channel).	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Thessalon	.....	.....	.....	15,632	.....	46,534	4,000	.....
2	Cutler Bay and Sagamuck	.....	.....	.....	.....	.....	2,000	.....	120,000
3	Marksville	.....	.....	5	.....	5	500	.....	.....
4	Mississauga	.....	.....	.....	74,000	.....	302,000	.....	20,000
5	Haywood Island	.....	.....	.....	3,000	.....	14,000	.....	2,000
6	Laloche and Manitowaning	.....	.....	.....	12,000	.....	10,000	.....	10,000
7	Kagawong	.....	.....	.....	36,989	.....	53,498	6,360	43,759
8	Darch and Innis Islands	.....	.....	.....	217	.....	2,474	269	1,948
9	Meldrum Bay	.....	.....	.....	2,000	.....	4,000	.....	.....
10	Cockburn Island	.....	.....	.....	.....	.....	95,000	.....	.....
11	Fitzwilliam Island	.....	.....	.....	25,000	.....	46,000	.....	.....
12	Squaw Island	.....	.....	.....	137,820	.....	237,555	.....	.....
13	Duck Island	.....	.....	.....	44,036	.....	328,327	.....	.....
14	South Bay Mouth	.....	.....	.....	10,872	.....	148,153	.....	.....
15	Killarney	.....	.....	.....	62,000	.....	70,000	.....	30,000
16	Providence Bay	.....	.....	.....	.....	.....	54,000	.....	.....
17	Rabbit and Strawberry Islands	.....	.....	.....	2,700	.....	3,500	.....	.....
18	Johns and Lonely Islands	.....	.....	.....	6,000	.....	21,000	.....	5,000
19	Sheguiandah and Frazer Bay	.....	.....	.....	26,363	.....	14,810	8,403	26,799
20	Wekwemikong and Gore Bay	.....	.....	.....	15,500	.....	38,000	.....	.....
	Totals	.....	.....	5	474,129	5	1,491,351	19,032	259,506
	Values	.....	.....	$ c. 50 00	$ c. 47,412 90	$ c. 50 00	$ c. 149,135 10	$ c. 1,522 56	$ c. 25,950 60

FISHERIES

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.														Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night lines.		Spears.			Freezers and ice houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.		No.	Value.	No.	Value.
		$		$		$		$		$		$			$		$
..	.....	.....	2	900	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
...	....	.....	10	1,500	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
...	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	6	1,500	....	.....	....	.....	.....	.....	....	.....		....	.....	1	500
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	5	800	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	8	1,000	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	2	400	....	.....	....	.....	.....	.....	....	.....		1	100	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	2	300	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	6	950	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	8	800	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	15	2,400	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	5	800	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
...	.....	.....	5	1,000	....	.....	....	.....	.....	.....	....	.....		2	475	....	.....
....	.....	.....	7	950	....	.....	....	.....	.....	.....	....	.....		....	.....	....	.....
....	.....	.....	81	$13,300	....	.....	....	.....	.....	.....	....	.....		3	$575	1	$500

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and Coarse fish.	Caviare.	Sturgeon Bladders.	Bass.	Maskinonge	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,536 60
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12,200 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150 00
4,000	.....	.....	.....	.....	20,000	100	.....	.....	.....	.....	41,300 00
.....	.....	.....	.....	.....	2,000	.....	.....	.....	.....	.....	1,900 00
.....	.....	.....	.....	.....	2,000	.....	.....	.....	.....	.....	3,300 00
9,570	.....	.....	.....	.....	1,490	.....	.....	.....	.....	.....	15,443 40
120	.....	.....	.....	.....	400	.....	.....	.....	.....	.....	523 12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,500 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,100 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37,537 50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37,236 30
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,902 50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16,200 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,400 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	620 00
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,200 00
465	.....	.....	.....	.....	32	.....	.....	.....	.....	.....	7,540 79
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,350 00
14,155	.....	.....	.....	.....	23,922	100	.....	.....	.....	.....	227,540 51
$ c.					$ c.	$ c.					
2,123 25	.....	.....	.....	.....	1,196 10	100 00	.....	.....	.....	.....	227,540 51

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the industry during

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Georgian Bay.			$			$				$
1	Parry Sound	5	.....	13,500	25	13	1,805	26	.....	402,000	20,682
2	Waubaushene	3	.....	.....	6	16	1,750	24	...	41,600	4,700
3	Penetanguishene	.....	.....	.....	....	11	575	21	.....	50,800	.....
4	Collingwood	.....	.....	.....	.....	20	2,600	37	.....	50,000	7,540
5	Meaford	5	120	18,000	23	16	2,015	33	.....	336,000	13,845
6	Byng Inlet	3	26	11,000	12	9	3,055	21	.....	168,000	250
7	Colpoy's Bay and Tobermory	6	86	16,000	27	39	2,455	69	.....	343,300	.....
	Totals	22	232	$58,500	93	124	$14,255	231	.....	1,391,700	$47,017

Return of the kinds, quantities and values of

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Doré.
	Georgian Bay.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Parry Sound	.....	.....	11	230,064	23	223,193	5,046	7,017
2	Waubaushene	24	2,500	10	18,000	12	25,475	41,482	13,200
3	Penetanguishene	5	2,000	.....	6,350	6	23,190	.....	250
4	Collingwood	106	48,250	.....	13,250	20	35,563	.....	.....
5	Meaford	.....	.....	.....	3,000	1	319,500	.....	.....
6	Byng Inlet	530	.....	.....	103,342	.....	95,206	10,506	25,200
7	Colpoy's Bay and Tobermory	175	3,621	.....	8,386	148	214,409	.....	.....
	Totals	840	56,371	21	382,392	210	936,536	57,028	45,667
	Values	$ c. 8,400 00	$ c. 2,818 55	$ c. 210 00	$ c. 38,239 20	$ c. 2,100 00	$ c. 93,653 60	$ c. 4,562 24	$ c. 4,566 70

FISHERIES.

quantity and value of all fishing materials and other fixtures employed in the fishing the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night lines.		Spears.		Freezers and ice houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
													8	2,725		
													2	350	3	300
													1	100		
			8	3,000					100							
													2	8,500	3	5,000
			8	$3,000					100				13	$11,675	6	$5,300

fish caught during the year 1909..

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
											46,770 60
2,550		2,700	30	300	1,545	200					10,391 61
											3,189 00
3,500		5,400			5,100	500					10,103 80
											32,260 00
50			529	235	2,780	100					28,812 32
			302								25,708 67
6,100		8,100	861	535	9,425	800					157,236 60
$ c.		$ c.	$ c.	$ c.	$ c.	$ c.					$ c.
915 00		405 00	51 66	42 80	471 25	800 00					157,236 60

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No	Yards.	Value.
	Lake Huron (proper).			$							$
1	Cape Hurd to Southampton	9	2,216	28,300	44	33	3,425	60	.....	534,600	20,660
2	Southampton to Pine Point	2	50	6,000	10	11	450	19	.....	168,325	5,787
3	County Huron	3	3,175	4,700	9	13	2,850	28	.....	174,000	5,420
4	County Lambton, including St. Clair River	.....	.....	.....	.....	71	14,195	112	.....	.....	.....
	Totals	14	5,441	$39,000	63	128	$20,920	219	.....	876,925	$31,867

Returns of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickeral, or Dore.
	Lake Huron (proper).	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Cape Hurd to Southampton	476	26,775	550	138,938	521	430,910	1,023	72
2	Southampton to Pine Point	.....	840	.....	2,000	25	137,490	.....	.....
3	County Huron	.....	14,571	.....	33,800	.....	167,085	.....	7,323
4	County Lambton, including St. Clair River	58	199,145	.....	69,667	.....	14,313	571	260,726
	Totals	534	241,331	550	244,405	546	749,798	1,594	268,121
	Values	$ c. 5,340 00	$ c. 12,066 55	$ c. 5,500 00	$ c. 24,440 50	$ c. 5,460 00	$ c. 74,979 80	$ c. 127 52	$ c. 26,812 10

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip Nets.		Night lines.		Spears.		Freezers and Ice Houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		
...	.....	.....	2	400	....	.....	10	42	.....	.....	14	17 50	4	3,500	....	.....
...	.....	.....	....	.....	....	.....	....	....	.....	.....	....	.....	2	600	....	.....
...	.....	.....	12	2,950	....	.....	...	.....	.....	.....	....	.....	12	1,575	....	.....
7	352	136	75	18,545	2	45	6	14	800	25	....	.....	5	1,300	....	.....
7	352	$136	89	$21,895	2	$45	16	$56	800	$25	14	$17 50	33	$6,975	....	.....

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and course fish.	Caviare.	Sturgeon Bladders.	Bass.	Maskinonge.	Carp.	Values.
lbs.	lbs.	lbs.	lbs.	lbs.	bs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
741	.....	5,992	27,492	10	2,017	104	.....	.....	.. ..	.....	76,148 96
.....	.....	.....	550	.....	50	.....	.....	.....	... .	.....	14,276 50
1,358	.....	35,883	2,264	.....	32,743	90	.....	.....	.....	.....	25,410 19
17,252	34	8,117	.....	203	106,715	897	204	.....	....	.....	54,420 61
19,354	34	49,992	30,306	213	141,525	1,091	204	.....	.. ..	.....	170,256 26
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.				$ c.
2,903 10	2 04	2,499 60	1,818 36	17 01	7,076 25	1,091 00	122 40	.....	.....	.....	170,256 26

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake St. Clair.			$			$				$
1	River Thames	...	...	...	...	...	...	...	...	...	...
2	Lake St. Clair	12	...	2,700	16	96	10,345	163	...	...	...
3	Detroit River	...	...	...	...	36	2,234	87	...	...	...
	Totals	12	...	$2,700	16	132	$12,579	250	...	...	...

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Lake St. Clair.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	River Thames	...	...	...	...	...	...	...	3,193
2	Lake St. Clair	...	...	...	56,200	...	...	34,809	74,770
3	Detroit River	...	...	...	64,100	...	...	15,035	11,735
	Totals	...	...	...	120,300	...	...	49,844	89,698
	Values	...	...	...	$ c. 12,030 00	...	...	$ c. 3,987 52	$ c. 8,969 80

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	....	.....	....	.....	38	45	550	11	....	.....	....	.....	...	.....
31	5,684	2,245	10	2,500	164	8,455	....	.....	5,050	102	....	.....	10	2,351	11	1,975
43	3,961	1,190	....	.....	1	5	...	.....	100	.....	....	.....	....	... .	5	1,160
74	9,645	$3,435	10	$2,500	165	$8,460	38	$45	5,700	$113	....	.....	10	$2,351	16	$3,135

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
.....	.....	.....	.....	.....	9,436	....	.....	.....	.....	.....	791 10
27,303	.....	104,776	1,000	66,956	481,637	1,000	. .....	.....	.....	35,280	56,419 90
900	.....	3,880	.....	775	138,900	.....	.....	... .	.....	43,605	16,994 40
28,203	.....	108,656	1,000	67,731	629,973	1,000	. .....	....	.....	78,885	$74,205 40
$ c.		$ c.	$ c.	$ c.	$ c.	$ c.				$ c.	$ c.
4,230 45	.....	5,432 80	60 00	5,418 48	31,498 65	1,000 00	....	....	.....	1,577 70	74,205 40

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, fishing industry

Number.	District.	Fishing Material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake Erie.			$			$				$
1	Pelee Island	3	93	18,500	20	14	1,775	30		34,000	2,745
2	Essex County	4	135	21,650	15	41	10,376	70		12,450	3,020
3	Kent County	2	72	7,150	14	65	15,360	135		16,000	4,000
4	Elgin West	2	30	9,500	14	35	13,475	57		26,000	3,600
5	Elgin East	11	278	40,600	79	6	1,350	17		124,000	19,600
6	Houghton	3	83	15,000	21					28,000	3,330
7	Walsingham					16	445	31		14,000	100
8	Long Point					6	140	9		300	210
9	Charlotteville					19	900	32		20,100	588
10	Inner Bay					11	230	24			
11	Woodhouse	3	83	13,000	18	4	75	10		30,000	7,200
12	Haldimand	9	123	22,850	40	25	1,218	48		82,100	14,650
13	Pt. Maitland to Pt. Colborne	5	74	10,450	22	17	861	26		75,000	6,440
14	Pt. Colborne to Niagara Falls					19		21		21,500	
	Totals	42	971	$158,700	243	278	$46,205	510		483,450	$65,483

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Lake Erie.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Pelee Island		262,716						37,587
2	Essex County		143,045		216,556			221,634	66,168
3	Kent County		1,555,763		73,126			1,180,430	80,705
4	Elgin West		651,200		46,950			687,200	16,100
5	Elgin East		1,404,907		109,537			66,130	456,030
6	Houghton	300	40,000	450	120,000			40,250	
7	Walsingham		7,150		2,499			12,376	11,419
8	Long Point		800					30,000	
9	Charlotteville		55,371		1,520			12,603	45,329
10	Inner Bay							8,442	
11	Woodhouse		208,065		78,239		870	891	336,009
12	Haldimand		175,503	7,779	261,408	1,704	1,520	281,465	27,992
13	Pt. Maitland to Pt. Colborne		109,865		40,422		400	161,215	4,179
14	Pt. Colborne to Niagara Falls		2,800		1,200				23,515
	Totals	300	4,617,185	8,229	951,457	1,704	2,790	2,702,636	1,005,033
	Values	$ c. 3,000 00	$ c. 230,859 25	$ c. 82,290 00	$ c. 95,145 70	$ c. 17,040 00	$ c. 279 00	$ c. 216,210 88	$ c. 100,503 30

FISHERIES.

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound Nets.		Hoop Nets.		Dip Nets.		Night lines.		Spears.		Freezers and Ice Houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
1	125	75	....	.....	....	.....	....	.....	.....	.....	....	....	1	300	1	3,000
3	2,600	1,300	67	22,800	4	70	....	.....	500	50	....	.....	19	7,000	....	.....
8	2,400	1,285	118	55,650	....	.....	....	.....	.....	.....	....	.....	36	13,300	....	.....
....	.....	.....	56	16,100	....	.....	...	.....	.....	.....	....	.....	36	11,950	....	.....
....	.....	.....	....	.....	....	.....	9	38	.....	.....	....	....	....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	2	300	....	.....
7	2,750	425	....	.....	....	.....	....	.....	.....	.....	....	.....	2	.....	....	.....
4	400	75	....	.....	....	.....	....	.....	.....	.....	....	.....	1	30	....	.....
10	2,780	735	....	.....	....	.....	....	.....	500	10	....	.....	2	105	....	.....
8	2,400	465	....	.....	....	.....	....	.....	700	.....	....	.....	1	.....	....	.....
3	780	60	....	.....	....	.....	...	.....	1,200	10	....	.....	3	3,000	....	.....
3	165	.....	24	6,100	....	.....	52	.....	100	.....	....	.....	12	4,275	3	1,200
....	.....	.....	8	2,150	....	.....	4	23	500	25	....	.....	8	3,775	....	.....
....	.....	.....	....	.....	....	.....	1	.....	6,500	.....	....	.....	....	.....	....	.....
47	14,400	$4,420	273	$102,800	4	$70	66	$61	10,000	$95	....	.....	123	$44,035	4	$4,200

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and course fish.	Caviare.	Sturgeon bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs	lbs.	No.	lbs.	lbs.	lbs.	$ c.
.....	.....	37,939	.....	.....	8,499	.....	.....	.....	.....	1,009	19,236 40
6,483	.....	51,996	.....	4,455	115,448	555	.....	.....	.....	90,605	65,223 52
7,778	.....	221,499	.....	2,226	190,685	375	.....	.....	.....	181,795	213,630 53
.....	.....	49,850	.....	600	27,600	.....	.....	.....	.....	.....	97,761 50
.....	.....	66,841	.....	98	5,258	.....	.....	.....	.....	.....	135,703 74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,720 00
.....	.....	32,188	.....	5,063	121,043	.....	.....	.....	.....	.....	10,805 97
2,952	.....	1,200	.....	.....	23,384	590	.....	.....	.....	.....	4,702 00
.....	.....	21,773	.....	7,938	89,951	.....	.....	.....	.....	.....	11,682 08
.....	.....	10,583	.....	4,760	87,325	.....	.....	.....	.....	.....	5,951 56
.....	.....	5,218	.....	1,360	16,522	.....	.....	.....	.....	.....	43,183 63
13,153	5,500	45,811	.....	4,094	44,569	413	100	.....	.....	35,870	163,555 72
5,504	.....	29,046	.....	818	42,720	247	.....	.....	.....	.....	27,616 89
11,115	.....	6,785	.....	.....	11,690	582	60	.....	.....	.....	5,820 50
46,985	5,500	580, 759	.....	31,412	784,677	2,762	160	.....	.....	312,270	$32,594 04
$ c.	$ c.	$ c.		$ c.	$ c.	$ c.	$ c.			$ c.	$ c.
7,047 75	330 00	29,037 95	.....	2,512 96	39,233 85	2,762 00	96 00	.....	.....	6,245 40	$32.594 04

ONTARIO

Return of the number of fishermen, tonnage and value of tugs, vessels and boats, the industry during

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Lake Ontario:			$			$				$
1	Lincoln	16	55	4,000	3	49	5,715	54	.....	142,700	11,238
2	Wentworth	5	.....	.....	.....	*192	4,395	200	.....	58,600	2,928
3	Halton and Peel	3	.....	.....	.....	25	4,680	46	.....	110,000	4,304
4	York	5	.....	.....	.....	12	2,240	18	.....	46,500	2,200
5	Ontario	.....	.....	.....	.....	7	255	14	.....	10,900	.....
6	Durham	.....	.....	.....	.....	3	195	3	.....	4,200	300
7	Northumberland	.....	.....	.....	.....	18	2,340	28	.....	50,000	1,325
8	Prince Edward	8	.....	.....	.....	59	1,923	104	.....	276,500	1,075
9	Bay of Quinte	2	5	115	.....	148	6,052	240	.....	130,450	3,160
10	Amherst Island and vicinity	11	38	965	20	.....	2,745	49	.....	156,500	3,579
11	Wolfe Island and vicinity	.....	.....	.....	.....	33	1,145	50	.....	17,600	496
	Totals	50	98	$5,080	23	546	$31,655	806	.....	1,003,950	$49,405

*166 of these are spearing houses.

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
	Lake Ontario.	brls.	lbs.	brls.	lbs.	brls.	bs.	lbs.	lbs.
1	Lincoln	.....	429,775	.....	96,118	.....	12,170	5,317	96,700
2	Wentworth	.....	76,180	.....	49,700	.....	37,740	16,600	450
3	Halton and Peel	.....	362,875	.....	25,000	.....	110,000	450	.....
4	York	.....	13,200	.....	21,105	.....	15,800	100	200
5	Ontario	.....	6,455	.....	6,311	.....	1,519	316	.....
6	Durham	.....	10,900	.....	2,479	.....	1,441	300	.....
7	Northumberland	.....	11,314	.....	14,920	.....	33,042	17,612	.....
8	Prince Edward	.....	5,586	.....	237,046	1	114,993	18,155	.....
9	Bay of Quinte	93	132,958	568	309,865	800	11,300	192,544	34,623
10	Amherst Island and vicinity	.....	.....	178	237,903	.....	78,784	18,309	9,556
11	Wolfe Island and vicinity	.....	.....	.....	3,700	300	2,800	33,880	.....
	Totals	93	1,049,243	746	1,004,147	1,101	419,589	303,583	141,529
	Values	$ c. 930 00	$ c. 52,426 15	$ c. 7,460 00	$ c. 100,414 70	$ c. 11,010 00	$ c. 41,958 90	$ c. 24,286 64	$ c. 14,152 90

FISHERIES.

quantity and value of all fishing materials and other fixtures employed in the fishing the year 1909.

Fishing material.														Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$		$		$		$		$
....	.....	.....	....	.....	....	.....	18	27	.....	.....	....	.....	2	450	....	.....
....	.....	.....	....	.....	....	.....	....	.....	1,300	13	166	208	3	450	....	.....
....	.....	.....	....	.....	....	.....	....	.....	500	1	....	.....	1	1,130	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	1	600	1	100
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
1	8	15	....	.....	36	640	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	....	.....	20	183	....	.....	.....	.....	....	.....	11	315	....	.....
....	.....	.....	....	.....	347	6,705	....	.....	2,650	66	....	.....	3	85	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
5	50	95	....	.....	42	693	....	.....	.....	.....	....	.....	....	.....	....	.....
6	58	$110	....	.....	445	$8,221	18	$27	4,450	$80	166	$208	21	$3,030	1	$100

fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon Bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
.....	.....	6,508	25	245	5,600	.....	.....	.....	.....	.....	43,039 41
.....	5,500	1,250	.....	.....	290	.....	.....	.....	.....	3,200	14,397 00
.. . ...	715	600	.....	300	22,000	.....	.....	.....	.....	150	32,879 65
5	.....	1,200	.....	.....	2,000	.....	.....	.....	.....	.....	4,539 25
.....	....	104	.....	5	.....	.....	.....	.....	.....	.....	1,136 63
.....	.....	.....	....	.....	2,640	.....	.....	.....	.....	.....	1,093 00
.....	2,100	1,000	.....	14,090	31,626	.....	.....	.....	.....	.....	9,655 36
150	21,652	2,215	.....	4,130	27,476	.....	.....	.....	.....	.....	40,082 17
.....	27,120	70,297	2,150	326,900	232,727	.....	.....	.....	.....	500	115,319 62
.....	.....	9,460	.....	.....	1,491	.....	.....	.....	.....	.....	36,416 57
.....	8,100	15,610	.....	29,500	19,000	.....	.....	.....	.....	.....	12,454 90
155	65,487	108,244	2,175	375,170	374,850	.....	.....	.....	.....	3,850	311,003 56
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.					$ c.	$ c.
23 25	3,929 22	5,412 20	130 50	30,013 60	18,742 50	.....	.....	.....	.....	77 00	311,003 5

ONTARIO

Return of the number of Fishermen, tonnage and value of tugs, vessels and boats, fishing industry

Number.	District.	Fishing Material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
	Inland Waters.			$			$				$
1	Frontenac County	.....	.....	.....	.....	19	310	6	.....	1,630	102
2	Leeds, Lanark, Lennox and Addington	.....	.....	.....	.....	114	2,398	141	.....	3,830	113
3	Russell, Prescott, Carleton and Renfrew	1	.....	300	.....	52	271	51	.....	2,450	180
4	Simcoe	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Welland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6	Temiskaming	1	.....	.....	4	1	475	.....	.....	4,000	.....
7	Wabatongashene Dog and Mindemoya Lakes	1	2	100	2	7	185	4	.....	5,760	485
	Totals	3	2	$400	6	193	$3,639	202	.....	17,670	$880

Return of the kinds, quantities and values

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel, or Dore.
	Inland Waters.	brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Frontenac County	.....	.....	.....	.....	.....	.....	13,643	.....
2	Leeds, Lanark, Lennox and Addington	30½	8,803	.....	.....	.....	500	20,678	.....
3	Russell, Prescott, Carleton and Renfrew	.....	.....	.....	300	.....	.....	6,234	5,240
4	Simcoe	.....	140	.....	710	.....	2,195	.....	.....
5	Welland	.....	.....	.....	.....	.....	.....	481	1,164
6	Temiskaming	.....	2,000	.....	5,912	.....	.....	3,008	8,782
7	Wabatongashene, Dog and Mindemoya Lakes	7	5,000	.....	5,092	.....	100	1,823	5,594
	Totals	37½	15,943	.....	12,014	.....	2,795	45,867	20,780
	Values	$ c. 375 00	$ c. 797 15	.....	$ c. 1,201 40	.....	$ c. 279 50	$ c. 3,669 36	$ c. 2,078 00

FISHERIES,

the quantity and value of all fishing materials and other fixtures employed in the during the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip Nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$				$		$		$		$		$		$
..	.....	.....	....	.....	39	825	....	.....	.....	.....	....	.....	....	.....	....	.....
17	140	100	....	.....	61	1,120	13	23	.....	.....	....	.....	18	750	1	50
...	.....	.....	...	.....	....	.....	2	1	8,600	83	....	.....	....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	800	.....	15	16	....	.....	....	.....
....	.....	.....	....	.....	....	.....	24	30	.....	.....	....	.....	....	.....	....	.....
....	...	....	.....	.....	....	.....	....	.....	.....	.....	....	.....	....	.....	....	.....
....	.....	.....	....	.....	....	.....	....	.....	.....	.....	...	.....	....	.....	....	.....
17	140	$100	...	.....	100	$1,945	39	$54	9,400	$83	15	$16	18	$750	1	$50

of fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and course fish.	Caviare.	Sturgeon bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
.....	1,703	2,211	.....	41,862	46,880	.....	.....	.....	.....	100	7,180 63
.....	85	529	.....	51,865	37,677	.....	.....	.....	.....	.....	8,513 99
7,475	2,259	3,056	... .	10,824	28,169	.....	.....	.....	.....	.....	1,736 68
.....	.....	145	.....	.....	75	.....	.....	.....	.....	.....	308 50
60	60	115	5	428	1,183	9	9	.....	.....	.....	284 32
1,116	.....	150	.....	.....	8,731	.....	.....	.....	....	....	2,425 99
.....	60	11	.....	.....	....	.....	.....	.....	.....	.....	1,548 59
8,681	7,167	6,247	5	101,979	122,715	9	9	.....	.....	100	21,995 70
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.			$ c.	$ c.
1,302 15	130 02	312 35	30	8,398 32	6,135 75	9 00	5 40	.....	.....	2 00	24,995 70

ONTARIO

Recapitulation of the number of fishermen, tonnage and value of tugs, vessels and boats, industry during

Number.	District.	Fishing material.									
		Tugs or vessels.				Boats.			Gill-Nets.		
		No.	Tonnage.	Value.	Men.	No.	Value.	Men.	No.	Yards.	Value.
				$			$				$
1	Lake of the Woods and Rainy River	3	175	6,600	8	41	7,650	96	.....	76,000	.....
2	Lake Superior.....	30	264	61,150	77	48	2,720	78	.....	902,900	41,570
3	Lake Huron (North Channel)....	20	227	60,305	58	63	9,905	115	.....	1,094,000	58,335
4	Georgian Bay	22	232	58,500	93	124	14,255	231	.....	1,391,700	47,017
5	Lake Huron (Proper).....	14	5,441	39,000	63	128	20,920	219	.....	876,925	31,867
6	Lake St. Clair and River Thames	12	.....	2,700	16	132	12,579	250	.....	.....	.....
7	Lake Erie.....	42	971	158,700	243	278	46,205	510	.....	483,450	65,483
8	Lake Ontario.....	50	98	5,080	23	546	31,655	806	.....	1,003,950	49,405
9	Inland Waters.....	3	2	400	6	193	3,639	202	.....	17,670	880
	Totals	196	7,410	$389,735	587	1,553	$149,528	2,507	.....	5,846,595	$294,557

Recapitulation of the kinds, quantities and values of

Number.	District.	Herring, salted.	Herring, fresh.	Whitefish, salted.	Whitefish, fresh.	Trout, salted.	Trout, fresh.	Pike.	Pickerel or Dore.
		brls.	lbs.	brls.	lbs.	brls.	lbs.	lbs.	lbs.
1	Lake of the Woods and Rainy River	.....	.....	.....	697,728	.....	10,400	266,829	368,193
2	Lake Superior.....	.....	131,000	18	466,286	8,772	1,401,511	57,069	57,759
3	Lake Huron (North Channel).	.....	.....	5	474,129	5	1,491,351	19,032	259,506
4	Georgian Bay	840	56,371	21	382,392	210	936,536	57,028	45,667
5	Lake Huron (Proper).....	534	241,331	550	244,405	546	749,798	1,594	268,121
6	Lake St. Clair and R. Thames	.....	.....	.....	120,300	.....	.....	49,844	89,698
7	Lake Erie.....	300	4,617,185	8,229	951,457	1,704	2,790	2,702,636	1,005,033
8	Lake Ontario.....	93	1,049,243	746	1,004,147	1,101	419,589	303,583	141,529
9	Inland Waters.....	37½	15,943	.....	12,014	.....	2,795	45,867	20,780
	Totals	1,804½	6,111,073	9,569	4,352,858	12,338	5,014,870	3,503,482	2,256,286
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	Values.....	18,045 00	305,553 65	95,690 00	435,285 80	123,380 00	501,487 00	280,278 56	225,628 60

FISHERIES.

the quantity and value of all fishing material and other fixtures employed in the fishing the year 1909.

Fishing material.													Other fixtures used in fishing.			
Seines.			Pound nets.		Hoop nets.		Dip nets.		Night Lines.		Spears.		Freezers and Ice Houses.		Piers and Wharves.	
No.	Yards.	Value.	No.	Value.	No.	Value.	No.	Value.	No. Hooks.	Value.	No.	Value.	No.	Value.	No.	Value.
		$		$		$		$	$	$		$ c.		$		$
....	.....	.....	14	3,000	6	450	....	.....	.....	.....	....	.....	12	6,950	7	2,125
....	.....	.....	31	6,700	....	....	....	....	.....	.....	....	.....	1	2,200	3	3,900
..	.....	.....	81	13,300	....	.....	....	.....	.....	.....	....	... .	3	575	1	500
....	.....	.....	8	3,000	....	.....	....	.....	100	.....	....	.....	13	11,675	6	5,300
7	352	136	89	21,895	2	45	16	56	800	25	14	17 50	33	6,975	....	.....
74	9,645	3,435	10	2,500	165	8,460	38	45	5,700	113	...	.....	10	2,351	16	3,135
47	14,400	4,420	273	102,800	4	70	66	61	10,000	95	....	.....	123	44,035	4	4,200
6	58	110	....	.....	445	8,221	18	27	4,450	80	166	208 00	21	3,030	1	100
17	140	100	....	.....	100	1,945	39	54	9,400	83	15	16 00	18	750	1	50
151	24,595	$3,781	509	$153,195	722	$19,191	177	$243	$30,450	$396	195	$241 50	237	$78,541	39	$19,310

fish caught during the year 1909.

Sturgeon.	Eels.	Perch.	Tullibee.	Catfish.	Mixed and coarse fish.	Caviare.	Sturgeon bladders.	Bass.	Maskinonge.	Carp.	Value.
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	No.	lbs.	lbs.	lbs.	$ c.
54,785	.....	100	66,450	20,400	62,613	1,260	200	....	.....	.....	147,340 82
1,240	.....	.....	7,000	.....	3,900	.....	.....	.....	.....	.....	292,372 12
14,155	.....	.....	.....	.....	23,922	100	.....	.....	.....	.....	227,540 51
6,100	.....	8,100	861	535	9,425	800	.....	.....	.....	.....	157,236 00
19,354	34	49,992	30,306	213	141,525	1,091	204	.....	.....	.....	170,256 26
28,203	.....	108,656	1,000	67,731	629,973	1,000	.....	.....	.....	78,885	74,205 40
46,985	5,500	580,759	.....	31,412	784,677	2,762	160	.....	.....	312,270	832,594 04
155	65,487	108,244	2,175	375,170	374,850	.....	.....	.....	.....	3,850	311,003 56
8,681	7,167	6,247	5	104,979	122,715	9	9	.....	.....	100	24,995 70
179,658	78,188	862,098	107,797	600,410	2,153,600	7,022	573	.....	.....	395,105	2237544 41
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.			$ c.	$ c.
26948 70	1,691 28	43104 90	6,467 82	48,035 20	107,680 00	7,022 00	343 80	.....	.....	7,902 10	2237544 41

Comparative Statement of yield for 1908-9, according to Districts.

	1908.	1909.	Increase.	Decrease.
Lake of the Woods and Rainy River District:				
Whitefish ..... lbs.	694,347	697,728	3,381	.....
Trout ..... "	32,336	10,400	.....	21,936
Pickerel ..... "	295,551	368,193	72,642	.....
Pike ..... "	230,499	266,829	36,330	.....
Maskinonge ..... "	.....	.....	.....	.....
Sturgeon ..... "	55,885	54,785	.....	1,100
Tullibee ..... "	75,403	66,450	.....	8,953
Catfish ..... "	27,847	20,400	.....	7,447
Coarse fish ..... "	45,200	62,613	17,413	.....
Caviare ..... "	3,250	1,260	.....	1,990
Bladders ..... No.	290	200	.....	90
Lake Superior:				
Herring ..... lbs.	353,905	131,000	.....	222,905
Whitefish ..... "	361,587	466,286	104,699	.....
Trout ..... "	1,305,370	1,401,511	96,141	.....
Pickerel ..... "	100,717	57,759	.....	42,958
Pike ..... "	68,677	57,069	.....	11,608
Sturgeon ..... "	3,575	1,240	.....	2,335
Tullibee ..... "	21,590	7,000	.....	14,590
Coarse fish ..... "	7,450	3,900,	.....	3,550
Caviare ..... "	.....	.....	.....	.....
Trout ..... bbls.	3,312	8,772	5,460	.....
Whitefish ..... "	5	18	13	.....
Eels ..... lbs.	.....	.....	.....	.....
Lake Huron, N.C.:				
Herring ..... bbls.	11	.....	.....	11
Herring ..... lbs.	10,000	.....	.....	10,000
Whitefish ..... "	657,969	474,129	.....	183,840
Trout ..... "	1,689,434	1,491,351	.....	198,083
Pickerel ..... "	168,950	259,506	90,556	.....
Pike ..... "	45,694	19,032	.....	26,662
Sturgeon Bladders ..... "	.....	.....	.....	.....
Sturgeon ..... "	24,907	14,155	.....	10,752
Perch ..... "	1,526	.....	.....	1,526
Catfish ..... "	.....	.....	.....	.....
Coarse fish ..... "	75,662	23,922	.....	51,740
Caviare ..... "	235	100	.....	135
Trout ..... bbls.	49	5	.....	44
Whitefish ..... "	16	5	.....	11
Georgian Bay:				
Herring ..... bbls.	224½	840	615½	.....
Herring ..... lbs.	51,745	56,371	4,626	.....
Whitefish ..... "	530,082	382,392	.....	157,690
Trout ..... "	1,154,884	936,536	.....	218,348
Pickerel ..... "	31,087	45,667	14,580	.....
Pike ..... "	40,184	57,028	16,844	.....
Sturgeon ..... "	5,510	6,100	590	.....
Perch ..... "	6,320	8,100	1,780	.....
Catfish ..... "	175	535	360	.....
Coarse fish ..... "	20,540	9,425	.....	11,115
White fish ..... bbls.	100	21	.....	79
Trout ..... "	338	210	.....	128
Caviare ..... lbs.	846	800	.....	46
Sturgeon Bladders ..... "	.....	.....	.....	.....
Carp ..... "	1,600	.....	.....	1,600
Lake Huron (proper):				
Herring ..... bbls.	519	534	15	.....
Herring ..... lbs.	270,257	241,331	.....	28,926
Whitefish ..... "	172,292	244,405	72,113	.....

Comparative Statement of yield 1908-9, according to Districts—Continued.

—	1908.	1909.	Increase.	Decrease.
Lake Huron (proper):—*Continued.*				
Trout ....lbs....	952,395	749,798	.....	202,597
Pickerel .... "	321,725	268,121	.....	53,604
Pike .... "	10,615	1,594	.....	9,021
Sturgeon .... "	14,693	19,354	4,661	1,000
Perch .... "	96,276	49,992	.....	46,284
Catfish .... "	661	213	.....	448
Carp .... "	1,000	.....	.....	1,000
Coarse fish .... "	139,633	141,525	1,892	.....
Caviare .... "	1,150	1,091	.....	59
Tullibee .... "	18,471	30,306	11,835	.....
Whitefish ....bbls....	3,515	550	.....	2,965
Trout .... "	868	546	.....	322
Sturgeon Bladders ....No....	291	204	.....	87
Lake & River St. Clair and Thames River:				
Whitefish ....lbs....	53,900	120,300	66,400	.....
Herring ....bbls....	.....	.....	.....	.....
Herring ....lbs....	1,000	.....	.....	1,000
Eels .... "	.....	.....	.....	.....
Pickerel .... "	75,407	89,698	14,291	.....
Pike .... "	41,222	49,844	8,622	.....
Sturgeon .... "	34,675	28,203	.....	6,472
Perch .... "	75,705	108,656	32,951	.....
Catfish .... "	69,349	67,731	.....	1,618
Coarse fish .... "	637,934	629,973	.....	7,961
Caviare .... "	1,366	1,000	.....	366
Tullibee .... "	.....	.....	.....	.....
Carp .... "	62,552	78,885	16,333	.....
Lake Erie:				
Herring ....bbls....	2	300	298	.....
Herring ....lbs....	5,300,415	4,617,185	.....	683,230
Whitefish .... "	826,189	951,457	125,268	.....
Trout .... "	3,884	2,790	.....	1,094
Pickerel .... "	1,855,661	1,005,033	.....	850,628
Pike .... "	1,407,562	2,702,636	1,295,074	.....
Sturgeon .... "	107,823	46,985	.....	60,838
Perch .... "	630,420	580,759	.....	49,661
Tullibee .... "	.....	.....	.....	.....
Catfish .... "	18,591	31,412	12,821	.....
Coarse fish .... "	500,107	784,677	284,570	.....
Caviare .... "	3,000	2,762	.....	238
Carp .... "	328,879	312,270	.....	16,609
Sturgeon Bladders ....No....	9	160	151	.....
Whitefish ....bbls....	2	8,229	8,227	.....
Trout .... "	23½	1,704	1,680½	.....
Lake Ontario;				
Herring ....bbls....	906	93	.....	813
Herring ....lbs....	1,140,784	1,049,243	.....	91,541
Whitefish .... "	773,397	1,004,147	230,750	.....
Trout .... "	176,284	419,589	243,305	.....
Pickerel .... "	138,721	141,529	2,808	.....
Pike .... "	183,194	303,583	120,389	.....
Sturgeon .... "	2,325	155	.....	2,170
Eels .... "	22,335	65,487	43,152	.....
Perch .... "	88,680	108,244	19,564	.....
Catfish .... "	230,904	375,170	144,266	.....
Coarse fish .... "	220,185	374,850	154,665	.....
Caviare .... "	.....	.....	.....	.....
Carp .... "	16,365	3,850	.....	12,515
Bladders .... "	.....	.....	.....	.....
Tullibee .... "	1,000	2,175	1,175	.....
Trout ....bbls....	5	1,101	1,096	.....
Whitefish .... "	112	746	634	.....

Comparative Statement of yield 1908-9, according to Districts,—Continued.

		1908.	1909.	Increase.	Decrease.
Inland Waters:					
Herring	bbls	29	37½	8½	
Herring	lbs	12,720	15,943	3,223	
Whitefish	"	6,880	12,014	5,134	
Trout	"	15	2,795	2,780	
Pickerel	"	18,072	20,780	2,708	
Pike	"	51,954	45,867		6,087
Sturgeon	"	5,235	8,681	3,446	
Eels	"	500	7,167	6,667	
Perch	"	16,421	6,247		10,174
Catfish	"	94,563	104,979	10,416	
Coarse fish	"	158,076	122,715		35,361
Carp	"		100	100	
Caviare	"	6,557	9		6,548
Tullibee	"	2,000	5		1,995
Sturgeon Bladders	No.		9	9	

Comparative Statement of the yield of the Fisheries of the Province.

Whitefish	lbs	4,076,643	4,352,858	276,215	
" (salted)	"	750,000	1,913,800	1,163,800	
Herring	"	7,140,826	6,111,073		1,029,753
" (salted)	"	338,300	360,900	22,600	
Trout	"	5,314,602	5,014,870		299,732
" (salted)	"	919,100	2,467,600	1,548,500	
Pickerel	"	3,005,891	2,256,286		749,605
Pike	"	2,079,601	3,503,482	1,423,881	
Sturgeon	"	254,628	179,658		74,970
Caviare	"	9,847	7,022		2,825
Eels	"	22,835	78,188	55,353	
Perch	"	915,348	862,098		53,250
Catfish	"	442,090	600,440	158,350	
Coarse fish	"	1,804,770	2,153,600	348,830	
Tullibee	"	118,464	107,797		10,667
Bladders	No.	590	573		17
Carp	lbs	416,953	395,105		21,848
Totals		27,610,488	30,365,350	4,997,529	2,242,667
Total increase 1909				2,754,862	

Statement of the yield and value of the Fisheries of the Province for the year 1909.

Kinds of Fish.	Quantity.	Price.	Value.
		$ c.	$ c.
Whitefish.....bbls....	9,569	10 00	95,690 00
Whitefish.....lbs....	4,352,858	10	435,285 80
Trout.....bbls....	12,338	10 00	123,380 00
Trout.....lbs....	5,014,870	10	501,487 00
Herring.....bbls....	1,804½	10 00	18,045 00
Herring.....lbs....	6,111,073	5	305,553 65
Pickerel..... "	2,256,286	10	225,628 60
Pike..... "	3,503,482	8	280,278 56
Sturgeon..... "	179,658	15	26,948 70
Caviare..... "	7,022	1 00	7,022 00
Bladders.....No....	573	60	343 80
Eels.....lbs....	78,188	6	4,691 28
Perch..... "	862,098	5	43,104 90
Catfish..... "	600,440	8	48,035 20
Coarse Fish..... "	2,153,600	5	107,680 00
Tullibee..... "	107,797	6	6,467 82
Carp..... "	395,105	2	7,902 10
Total.....			$2,237,544 41

Value of Ontario Fisheries from 1870 to 1909, inclusive.

Years.	Value.	Years.	Value.
	$		$ c.
		Brought forward.....	15,563,538 00
1870.....	264,982	1890.....	2,009,637 00
1871.....	193,524	1891.....	1,806,389 00
1872.....	267,633	1892.....	2,042,198 00
1873.....	293,091	1893.....	1,694,930 00
1874.....	446,267	1894.....	1,659,968 00
1875.....	453,194	1895.....	1,584,473 00
1876.....	437,229	1896.....	1,605,674 00
1877.....	438,223	1897.....	1,289,822 00
1878.....	348,122	1898.....	1,433,631 00
1879.....	367,133	1899.....	1,477,815 00
1880.....	444,491	1900.....	1,333,293 00
1881.....	509,903	1901.....	1,428,078 00
1882.....	825,457	1902.....	1,265,705 00
1883.....	1,027,033	1903.....	1,535,144 00
1884.....	1,133,724	1904.....	1,793,524 00
1885.....	1,342,692	1905.....	1,708,963 00
1886.....	1,435,998	1906.....	1,734,865 00
1887.....	1,531,850	1907.....	1,935,024 90
1888.....	1,839,869	1908.....	2,100,078 63
1889.....	1,963,123	1909.....	2,237,544 41
Carried forward.....	$15,563,538	Total.....	$49,239,999 94

RECAPITULATION

Of the Fishing Tugs, Nets, Boats, etc., employed in the Province.

Articles.	Value.
196 Tugs (7,410 Tons) (587 men)	$389,735 00
1,553 boats (2,507 men)	149,528 00
5,846,595 yards Gill-net	294,557 00
151 Seines (24,595 yds)	3,781 00
509 Pound nets	153,195 00
722 Hoop nets	19,191 00
177 Dip nets	243 00
30,450 Hooks on Set Lines	396 00
195 Spears	241 50
237 Freezers and Ice Houses	78,541 00
39 Piers and Wharves	19,310 00

Statement showing the number of fry distributed in the waters of the Province by the Federal Government from Dominion hatcheries.

Years.	Newcastle Hatchery.	Sandwich Hatchery.	Ottawa Hatchery.	Wiarton.	Sarnia.	Total.
1868-73	1,070,000	....	....	....	....	1,070,000
1874	350,000	....	....	....	....	350,000
1875	650,000	....	....	....	....	650,000
1876	700,000	8,000,000	....	....	....	8,700,000
1877	1,300,000	8,000,000	....	....	....	9,300,000
1878	2,605,000	20,000,000	....	....	....	22,605,000
1879	2,602,700	12,000,000	....	....	....	14,602,700
1880	1,923,000	13,500,000	....	....	....	15,423,000
1881	3,300,000	16,000,000	....	....	....	19,300,000
1882	4,841,000	44,000,000	....	....	....	48,841,000
1883	6,053,000	72,000,000	....	....	....	78,053,000
1884	8,800,000	37,000,000	....	....	....	45,800,000
1885	5,700,000	68,000,000	....	....	....	73,700,000
1886	6,451,000	57,000,000	....	....	....	63,451,000
1887	5,130,000	56,500,000	....	....	....	61,630,000
1888	8,076,000	56,000,000	....	....	....	64,076,000
1889	5,846,500	21,000,000	....	....	....	26,846,500
1890	7,736,000	52,000,000	5,732,000	....	....	65,468,000
1891	7,807,500	75,000,000	7,043,000	....	....	89,850,500
1892	4,823,500	44,500,000	4,909,000	....	....	54,232,000
1893	9,835,000	68,000,000	6,208,000	....	....	84,043,000
1894	6,000,000	47,000,000	4,480,000	....	....	57,480,000
1895	6,000,000	73,000,000	3,210,000	....	....	82,210,000
1896	5,200,000	61,000,000	3,950,000	....	....	70,150,000
1897	4,200,000	72,000,000	4,100,000	....	....	80,300,000
1898	4,325,000	71,000,000	3,020,000	....	....	78,345,000
1899	4,050,000	73,000,000	3,700,000	....	....	80,750,000
1900	5,175,000	90,000,000	3,450,000	....	....	98,625,000
1901	5,900,000	67,000,000	3,410,000	....	....	76,310,000
1902	650,000	100,000,000	1,245,000	....	....	101,895,000
1903	2,500,000	90,000,000	1,201,000	....	....	93,701,000
1904	1,475,000	75,000,000	877,000	....	....	77,352,000
1905	1,480,000	106,000,000	1,103,000	....	....	108,583,000
1906	1,550,000	88,000,000	1,123,000	....	....	90,673,000
1907	1,807,000	103,000,000	1,152,000	....	....	106,359,000
1908	2,600,000	79,000,000	2,010,000	4,955,000	51,000,000	139,565,000
Totals...	148,511,700	1,923,500,000	61,923,000	4,955,000	51,000,000	2,050,289,700

WATERS STOCKED FROM 1901 TO 1910, WITH THE NUMBER AND KINDS OF FISH PLANTED IN EACH.

1901.

Waters stocked.	Species.	Number.
Muskoka Lake	Bass	1,205
Lake Rosseau	Bass	700
Lake Joseph	Bass	1,052
Fairy and Vernon Lakes	Bass	244
Lake of Bays	Bass	693
Thames River at Ingersoll	Bass	225
Thames River at Woodstock	Bass	225
Bear Creek at Strathroy	Bass	396
Thames River at Dorchester	Bass	696
Lake Couchiching	Bass	436
Stoney Lake	Bass	751
Lake Simcoe at Jackson's Point	Bass	603
Holland River	Bass	387
Golden Lake	Bass	372
Severn River	Bass	526
Grand River at Cayuga	Bass	400
Grand River at Brantford	Bass	274
Kempenfeldt Bay	Bass	300
		9,841

1902.

Waters stocked.	Species.	Number.
Muskoka Lake	Bass	246
Lake Joseph	Bass	256
Lake Rosseau	Bass	227
Lake Couchiching	Bass	285
Bear Creek at Strathroy	Bass	395
Stoney Lake	Bass	330
Huntsville Lakes	Bass	265
Winnipeg River	Brook trout	55
		2,059

1903.

Waters stocked.	Species	Number
Bear Creek at Strathroy	Bass	926
Lake Rosseau	Bass	1,130
Lake Joseph	Bass	500
Muskoka Lake	Bass	1,002
Lake of Bays	Bass	371
Sparrow Lake	Bass	650
Lake Couchiching	Bass	258
Long Lake at Rat Portage	Bass	460
Golden Lake	Bass	100
Mink Lake	Bass	85
Clear Lake	Bass	85
White Lake	Bass	100
Lynn River at Lake Simcoe	Bass	355
Grand River at Brantford	Bass	425
Thames River at Ingersoll	Bass	75
Thames River at London	Bass	200
Thames River at St. Marys	Bass	205
Grand River at Fergus	Bass	100
Grand River at Grand Valley	Bass	70
Grand River at Paris	Bass	130
Musselman's Lake	Bass	200
Lake of Bays	Bass	500
		7,927

WATERS STOCKED FROM 1901 TO 1910, WITH THE NUMBER AND KINDS OF FISH PLANTED IN EACH.—*Continued.*

1904.

Waters stocked.	Species.	Number.
Credit River	Bass	115
Lake Rosseau	Bass	380
Green Lake	Bass	135
Opinicon Forks	Bass	50
Lake near Barry's Bay	Bass	30
Barry's Bay	Bass	100
Gorman Lake	Bass	75
Golden Lake	Bass	565
Mink Lake	Bass	60
White Lake	Bass	160
Clear Lake	Bass	50
Snell's Lake	Bass	100
Lake Joseph	Bass	725
Bass Lake	Bass	200
Lake Couchiching	Bass	230
Lake Joseph	Bass	415
Lake of Bays	Bass	530
Lake Simcoe at Jackson's Point	Bass	785
Beaver River at Cannington	Bass	250
Balsam Lake	Bass	400
Lake of Bays	Bass Fingerlings	5,000
Oxbow River at Komoka	Bass Fingerlings	1,200
Lake Scugog	Bass Fingerlings	1,400
		12,955

1905.

Waters stocked.	Species.	Number.
Lake Scugog	Bass	400
Stoney Lake	Bass	600
Muskoka Lake	Bass	500
Thames River at Stratford	Bass	250
Thames River at Mitchell	Bass	350
Lake Couchiching	Bass	500
Gull Lake (near Gravenhurst)	Bass	100
Lake of Bays	Bass	400
		3,100

1906.

Waters stocked.	Species.	Number.
Lake Simcoe	Bass	450
Lake of Bays	Bass	700
Gull River	Bass	610
Grand River	Bass	575
Lake Scugog	Bass	400
Muskoka Lake	Bass	700
River Nith	Bass	600
Lake Simcoe	Bass	700
"	Bass	700
		5,435

1908.

Waters stocked.	Species.	Number.
Sparrow Lake	Bass	500
Haliburton Lake	Bass	520
Puslinch Lake	Bass Fingerlings	725
River vicinity Kenora	Trout, Speckled, fry	2,000
		3,745

WATERS STOCKED FROM 1901 TO 1910, WITH THE NUMBER AND KINDS OF FISH PLANTED IN EACH.—*Continued.*

1909.

Waters stocked.	Species.		Number.
Mohawk Lake	Bass	Fingerlings	1,000
Lake Rosseau	Bass	Fingerlings	1,500
Lake Muskoka	Bass	Fingerlings	1,500
Lake Joseph	Bass	Fingerlings	2,000
Lake of Bays	Bass	Fingerlings	2,000
Stoney Lake	Bass	Fingerlings	3,500
Gull Lake	Bass	Fingerlings	200
Whiteman's Creek	Bass	Fingerlings	200
Cooley's Pond	Bass	Fingerlings	150
Sparrow Lake	Bass	Fingerlings	2,500
			14,550

1910.

Waters stocked.	Species.		Number.
Rideau waters (near Merrickville)	Bass	Fingerlings	3,000
Lake Rosseau	Bass	Fingerlings	3,000
Lake Joseph	Bass	Fingerlings	3,000
Lake Muskoka	Bass	Fingerlings	4,000
Gull Lake	Bass	Fingerlings	100
Sturgeon Lake	Bass	Fingerlings	4,000
Cameron Lake	Bass	Fingerlings	3,000
Pigeon Lake	Bass	Fingerlings	3,000
Fairy Lake and vicinity of Huntsville	Bass	Fingerlings	8,500
Victoria Lake	Bass	Fingerlings	2,000
Grand River (at Brantford)	Bass	Fingerlings	300
Clear Lake	Bass	Fingerlings	2,000
Long Lake (vicinity of Utterson)	Bass	Fingerlings	1,725
Grand River (at Brantford)	Parent	Bass	50
Oakland Pond	Parent	Bass	25
		Total Bass Fingerlings	37,625
		Total Parent Bass	75
		Grand Total	37,700

FINES AND CONFISCATIONS DURING THE YEAR 1910, ON ACCOUNT OF FISHERIES.

Twenty spears, 2 jacklights; 44 hoop nets; 97 gill nets, 12,090 yards of same; 22 seines; 22 trap nets; 1 dip net; 11 night lines, 2,230 yards of same; 6 row boats; 1 yawl; 2 punts; 30 hooks; 2 bag nets; 1 wire net; 29 boxes of fish.

Fisheries:—Amount of fines and sale of confiscated goods was over $2,648.32.

Game:—Amount of fines and confiscations, $6,298.55.

LIST OF GAME AND FISHERY WARDENS.

Name.	Residence.	District.
Burt, William	Simcoe	Niagara Peninsula.
Chauvin, Victor ...	Windsor	Western District.
Parks, G. M.	North Bay ...	District of Nipissing.
Robinson, J. T.	Sault Ste. Marie	District of Algoma.
Sterling, C. N.	Kenora	Thunder Bay and Rainy River.
Willmott, J. H.	Beaumaris ...	Muskoka and Parry Sound.

LIST OF OVERSEERS.

Name.	Residence.	District.
Acton, Nassau	Gananoque ...	Gananoque River, and for that part of the River St. Lawrence lying between Wolfe Island and Rockport.
Adair, William.....	Norland.....	Townships of Laxton, Digby and Somerville in the County of Victoria.
Andrews, Samuel...	Micksburg....	For the Tps. of Bromley, Stafford, and Ross in the County of Renfrew, with joint jurisdiction over the Tp. of Westmeath.
Avery, Melzar	Sharbot Lake.	Township of Oso, with joint jurisdiction over the Tp. of Hinchinbrook in the Electoral District of Addington.
Bailey, G. L.	Callander	Lake Nipissing, in the Districts of Parry Sound and Nipissing.
Barr, George	Harrowsmith .	Tp. Portland in Co. Frontenac, with joint jurisdiction over Desert and Knowlton Lakes.
Beatty, John	Old Fort, Midland	With jurisdiction with other overseers over Tps. Tay and Matchedash, Co. Simcoe.
Best, T. F.....	Niagara-on-the-Lake.....	Niagara River between Niagara Falls and the mouth of the river.
Birch, W. J.	Delta	Upper and Lower Beverley lakes and rivers.
Blanchard, F.	Fort Frances.	Rainy River and adjacent waters.
Blea, Daniel	Uplands	Province of Ontario.
Blunden, H. A.	Sarnia	Co. Lambton, exclusive of Walpole and St. Ann's Islands.
Boate, J. R.	Fowler's Cor's.	Tp. Emily, in Co. Victoria.
Boler, William	Byron	River Thames, between London and boundary line between Townships Delaware and Westminster, County of Middlesex.
Botting, Peter	Fermoy	The waters in the Township of Bedford in the County of Frontenac.
Bourgon, J. B.	Rockland	Counties of Prescott, Russell, Stormont and Glengarry, with jurisdiction over so much of the Rivers Ottawa and St. Lawrence as lies in front of said counties.
Boyd, J. H.	Merrickville ..	Rideau River and tributaries, fronting on County of Grenville.
Boynton, A. O.	Kirkfield	Tp. Eldon, in Co. Victoria.
Bradbury, J. R.....	Blind River...	District of Algoma.
Bradshaw, A.	Lindsay	Townships Mariposa and Ops. County Victoria.
Briggs. T. J.	Bridgeburg ..	County of Welland.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Brisbin, Angus	Picton	For the waters of Lake Ontario fronting Tps. North and South Marysburg, including all waters surrounding islands in said townships, also Main Duck Islands, and that portion of Bay of Quinte fronting these townships, as well as the waters of the Bay of Quinte known as Picton Harbor, in Tp. Hallowell.
Brown, R. M.....	Halton.....	Townships of Nassagaweya and Esquesing in the County of Halton.
Briscoe, W. L.	Killaloe Sta'n.	Townships of Jones, Sherwood, Hagarty, Radcliffe, Brudenell, Raglan, and Lynedoch, Co. Renfrew.
Burke, George	Perth	For the Town of Perth, Tps. of North Emsley, Drummond, North Burgess, and the first two concessions of the Tp. of Bathurst, Co. Lanark.
Burns, D. E.	Pembroke	The waters between Allumette Rapids and Deux Joachim.
Burtcheall, C.	Coboconk	Balsam and Mud Turtle Lakes, County Victoria.
Calbeck, A.	Sault Ste. Marie	That portion of the District of Algoma lying west of the Village of Algoma Mills, exclusive of Cockburn and Manitoulin Islands, and over the waters lying in front of the said district, and with joint jurisdiction over the waters lying between said Islands and the mainland west of a line due south from Algoma Mills.
Campbell, John	Sylvan	River Aux Sauble and tributaries.
Carson, R. W.	Peterboro' ...	Counties Simcoe, Ontario, Victoria, Peterboro', Durham, and Northumberland, and York.
Cassan, C. H.	Campbellford .	Trent River and tributaries, Co. Northumberland, from Campbellford to Trent Bridge.
Cheer, T. H.	Brighton	For the waters of Lake Ontario fronting Co. Northumberland, also inland waters tributary to said lake in said county.
Clark, Gordon.....	Westport.....	Township of North Crosby in the County of Leeds, and with joint jurisdiction with any other overseer over Wolf Lake in said township, and the Township of Bedford in County of Frontenac.
Clarkson, William .	Lakehurst ...	West half of Township of Smith, Township of Ennismore, west half Township Harvey, Townships of Galway and Cavendish, County Peterboro'.
Clunis, A.	Claude	In and for the Townships of Chinguacousy, Caledon and Albion, in the County of Peel.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Collins, W. E.	Strathroy	Townships of Adelaide, Metcalfe, and with joint jurisdiction over Township Caradoc, Co. Middlesex.
Colter, Samuel	Gilford	Lake Simcoe, from the 10th concession, Tp. Innisfil, to the mouth of the Holland River.
Conger, David	West Lake ...	Lake Ontario fronting Townships Hallowell and Athol, also for the Village of Wellington in the Township of Hillier, and for the inland lakes and streams in said Townships of Hallowell and Athol.
Cook, H. G. A.	Niagara Falls.	County Welland.
Corsant, A.	Masonville ...	County Middlesex, east of boundary line between the Townships of Westminster and Delaware, London and Lobo.
Covell, H. N.	Lombardy ...	Township South Elmsley, County Leeds.
Cox, Matthew	Howe Island..	The waters of St. Lawrence River around Howe Island.
Croker, Oscar.....	Parry Sound..	Townships of Perry, Bethune, Proudfoot and Armour in the District of Parry Sound, and with joint jurisdiction over the District of Parry Sound.
Crotty, John	Bothwell	River Thames between Village of Wardsville and easterly limits of County of Kent, in County of Middlesex.
Dafoe, Peter W. ...	Napanee	Township of Richmond, with joint jurisdiction over the Township of North Fredericksburg.
Davis, J. W.	Sydenham	Township Loughboro.
Deacon, Ephraim...	Bolingbroke ..	In and for the Tps. of Bathurst and S. Sherbrooke in the County of Lanark, including Christy's Lake, and with joint jurisdiction over the Tp. of Bedford in the County of Frontenac.
Devine, John	Renfrew	Townships Horton, McNab, Admaston, Bagot, Blythfield, Brougham, Griffith, and Matawatchan, in the County of Renfrew.
Diboll, Joseph.....	Outlook P.O., St. Joseph's Island.	District of Algoma.
Donaldson, W. J. ...	Donaldson ...	Townships of Palmerston, Clarendon, Barrie, Miller, North Canonto and South Canonto, electoral district of Addington.
Drew, Henry	Long Lake ...	Townships Hinchinbrooke, Oso, Olden and Kennebec, District of Addington.
Drouillard, Arsas...	Walkerville. ..	County of Essex.
Dunlop, James	Mackey's St'n.	Ottawa River between Deux Joachim and Mattawa, and over waters in townships in Ontario bordering on said river.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Dupuis, Ferdinand..	Hawkesbury .	County of Prescott.
Dusang, B. A.	Fesserton	Tps. of Freeman, Gibson, Baxter, Wood and Morrison in District of Muskoka, also over Severn River.
Eddy, Fred.....	Carterton	The whole of St. Joseph's Island.
Fisher, James	Sunbury	Townships Storrington, including Rideau waters from Brewer's Mills to south limit of the township with jurisdiction over all of Loughboro Lake and the lakes of the Township of Storrington.
Fleming, E.	Hastings	Village of Hastings.
Fleming, John.....	Newboro'	Cos. Leeds, Frontenac, Lennox & Addington, Hastings, Prince Edward, Northumberland, Lanark, Carleton, Russell, Prescott, Glengarry, Stormont, Dundas and Grenville.
Fowler, R. C.....	Emerald	Tps. Ernestown, Amherst Island and S. Fredericksburgh, fronting Lake Ontario and the Bay of Quinte to Cole's Point, and with joint jurisdiction over any of the tps. fronting any of these waters in the Co. of Lennox.
Fox, Eben R.	Northport	For that portion of the Bay of Quinte fronting Township Ameliasburg east of Belleville Bridge, and also Township Sophiasburg, and over all the inland waters within Township Sophiasburg, and with joint jurisdiction with any other overseer over all inland waters in Township of Ameliasburg.
Fox, George (Sr.) ..	Dalrymple ...	Tp. of Carden in Co. Victoria, with jurisdiction over Mud Lake in said county, and with joint jurisdiction over that portion of Mud Lake in Co. Ontario.
Fraser, J. A.	Prescott	St. Lawrence River from the head of Cardinal Rapids west to Rockport.
Gainforth, Wm.	Haliburton ...	Townships Stanhope, Guilford, Harburn, Dudley, Dysart and Minden, District of Haliburton.
Gallagher, Hugh ...	Eganville	For the Tps. of S. Algoma, N. Algoma, Wilberforce, Grattan and Sebastopol, in the County of Renfrew.
Gates, George	Whitemount ..	Rideau waters between Kingston Mills and Brewer's Mills, with joint jurisdiction over the Rideau waters between Kingston Mills and the River St. Lawrence.
Gault, T. G.	Deseronto	Bay of Quinte, East Riding County of Hastings and for Moira River and other waters in said riding.
Gillespie, James ...	Berkeley	Electoral District of Centre Grey and for Township of Glenelg in South Grey.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Gordon, Walter	Port Arthur ..	In and for the District of Thunder Bay.
Green, Adam	Diamond	Townships Huntley and Fitzroy, County Carleton.
Green, Geo. G.	Bradford	Holland River on the north side in Township West Gwillimbury westward to the forks of the river in County Simcoe.
Green, John	Marmora	Township of Marmora, County Hastings.
Gunter, Harvey ...	McRae P.O. ..	Townships of Grimsthorpe and Cashel in County Hastings, and with joint jurisdiction over Townships Tudor, Lake, Wollaston, Limerick, Faraday, Dungannon and Mayo, in said county.
Hall, Andrew	Gore Bay	West end of Manitoulin Island, including the Townships of Gordon and Mills in the District of Algoma.
Halward, Chas.	Cannington ..	Beaver River running through the Townships of Brock and Thorah, and the Villages of Sunderland and Cannington, in the County of Ontario.
Hayes, Henry	Murray	Bay of Quinte, as lies in front of the East Riding of Northumberland, for that portion of the River Trent, lying between the Townships of Sidney and the Bay of Quinte, and for the inland waters of the Townships of Murray, Dryden and Cramahe and Haldimand.
Hembruff, Jos.	Manitowaning.	Lake Manitou on Manitoulin Island and the streams tributary thereto.
Henderson, H. A. ..	Pelee Island .	For Pelee Island and the other islands in Lake Erie, south of the County of Essex.
Heneilley, F. H. ...	Warkworth ...	River Trent and tributaries, in County Northumberland from Percy Boom to Campbellford Bridge.
Hess, James	Hastings	Trent River and tributaries in County Northumberland, from Trent Bridge to Rice Lake.
Hewitt, James	Honey Harbor	Province of Ontario.
Holliday, Henry ...	Woife Island..	Township of Wolfe Island and for the islands of Simcoe, Garden and Horseshoe, and any other islands comprised in the Township of Wolfe Island.
Hood, Geo., Sr.	Scugog	For the Township of Reach in the County of Ontario, and for the Township of Mariposa in the County of Victoria and over so much of the waters of Lake Scugog as lies in front of the said townships, and for the westerly half of Scugog Island, and over the waters of Lake Scugog fronting thereon.
Howell, James	Bancroft	Townships Faraday, Dungannon and Herschell, in County Hastings.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Huffman, E. M.	Hay Bay	Townships of Richmond, Adolphustown, North and South Fredericksburg with jurisdiction over Hay Bay and Bay of Quinte, in Counties Lennox and Addington.
Hunter, William ...	Tehkummah ..	Manitoulin Island in Lake Huron.
Irish, John E.	Vennachar....	Tps. of Anglesea, Effingham, Ashley, Denbigh and Abinger, in the County of Addington.
Irwin, David	Little Current.	In and for that portion of the District of Algoma lying east of the Village of Algoma Mills, and for Cockburn and Manitoulin Islands, and in and over the waters that lie in front of the said District and which surround the said islands, and with joint jurisdiction with any other overseer who has been or may hereafter be appointed.
Jermyn, J. W.	Wiarton	Georgian Bay, County of Bruce, lying east and south of Tobermory Harbor, but exclusive of the said Harbor.
Jickling, Chas.	St. Paul's Station.	County Perth and for Townships East Nissouri and East and West Zorra, in County Oxford.
Johnson, John	Port Hope ...	Townships Hope and Cavan, in the County of Durham, with joint jurisdiction with any other Game and Fishery overseer or overseers over County Durham.
Johnson, Henry ...	Brantford	That part of Grand River lying between the southerly boundary of Town of Galt and the boundary line between Tuscarora and Onondaga Townships in County Brant and the Townships of Seneca and Oneida in Haldimand County; also concurrent jurisdiction with Overseer Kern over Tributaries to the Grand River in Burford, Oakland and Brantford Townships west of Grand River.
Johnston, James ...	Melville Cross	Townships of Caledon and Albion in the County of Peel.
Johnston, Thos.	Royston	Townships of Lount, Machar, Laurier, Croft, Chapman, Strong, Jolly, Spence, Ryerson, Armour, Proudfoot, Monteith, McMurrich, Perry and Bethune, District of Parry Sound.
Johnston, W. H.....	Harwood	Rice Lake, in the Townships of Hamilton and Alnwick, County Northumberland.
Jones, David	Welland	County of Welland.
Jones, John	Fenelon Falls.	For the north end of Sturgeon Lake, and Cameron Lake to Rosedale Locks, Burnt River and Rosedale River in the County of Victoria.
Kehoe, D.	Millarton	That portion of County Bruce lying South of Indian Reserve and Township of Amabel with jurisdiction over Lake Huron in front of said county, south of Southampton.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Kennedy, J. A.	Tichborne	Eagle Lake in the Townships of Hinchinbrooke and Bedford, and with joint jurisdiction over the Township of Bedford in the County of Frontenac.
Kent, A. J.	Bewdley	Rice Lake from Ley's Point on the south shore of said lake around the head of Lake to Barnard's Bay on the north shore of Rice Lake.
Kern, Jacob	Burford	County of Brant, comprising Townships of Burford, Oakland and Brantford, west of Grand River, but exclusive of said River.
Kerr, C. J.	Hamilton	County of Wentworth.
Laframboise, Remi..	Canard River.	Detroit River, fronting Townships of Sandwich, West Anderdon and Malden, and also Canadian Islands in said River, County Essex.
Lambkin, Richard .	Loring	Townships of Harrison, Burton, McKenzie, Ferrie, Wallbridge, Brown, Wilson, Mills, Pringle, Gurd, Himsworth, Nipissing, Patterson, Hardy, McConkey, Blair, and Mowat, in the District of Parry Sound.
Langford, Newton .	Dorset	Townships McLean, Ridout, Franklin and Brunel, District of Muskoka, and Townships McClintock, Livingstone, Sherbourne and Havelock, District of Haliburton.
Laughington, Henry.	Parry Sound..	For the Township of Shawanaga, Ferguson, Carling, McDougal, McKellar, Christie, Foley, Parry Island, Cowper and Conger in the District of Parry Sound.
Laughlin, J. H.	New Lowell ..	Tps. of Nottawasaga, Sunnidale and Flos, in Co. Simcoe, with joint jurisdiction over the Tp. of Vespra in said county.
Leadley, Robt.	Barrie	For the Township of Vespra and the Town of Barrie, in the County of Simcoe, and over so much of the waters of Kempenfeldt Bay as lies in front of the said town and township; also, that portion of Kempenfeldt Bay, lying in front of the Township of Oro.
Lean, Wellington ..	Apsley	Tps. of Anstruther and Chandos, County of Peterboro'.
Lee, Edward	Lowbanks	Townships of Moulton, Sherbrooke and Wainfleet, in the District of Monck and Lake Erie.
Leitch, P. A.	Nepigon	River and Lake Nepigon.
Little, David	Blairton	Tps. of Belmont and Bethune in Co. Peterboro'.
Little, Richard	Wallaceburg .	County of Kent, fronting on Lake St. Clair, exclusive of Dover West Township, also Walpole and Ste. Anne's Islands, County Lambton.

LIST OF OVERSEERS.—*Continued.*

Name	Residence.	District.
Loveday, E. T.	Ottawa	In and for the Townships of Nepean, Gloucester, North Gower and Osgoode, in the County of Carleton, with jurisdiction over so much of the River Ottawa and the River Rideau and the Rideau Canal as lies in front or within said Townships, and over the tributaries to the said rivers and canals.
McAllister, J. R. ...	Gore's L'nding	Rice Lake, between Jubilee Point and Lower Close's Point and the waters tributary thereto, in the Tps. of Hamilton and Alnwick, Co. of Northumberland.
McClennan, Kenneth	Grovesend ...	Townships of Yarmouth, Malahide and Bayham, with jurisdiction over so much of the waters of Lake Erie as lies in front of the said townships and the tributaries thereto.
McEwen, A.	Aldboro'	Townships of Southwold, Dunwich and Aldborough, exclusive of the River Thames, with jurisdiction over so much of Lake Erie as lies in front of the said townships and tributaries thereto.
McGinn, William ...	Orillia	Townships of Orillia, and Oro, in the County of Simcoe, and over so much of Shingle and Carthews Bays, and Lakes Couchiching and Simcoe, as lies in front of said townships and over River Severn.
McGuire, J.	Jones Falls ..	Rideau River, fronting on the Township of South Crosby, County of Leeds.
McIntyre, A.	Keene	Tps. of Otonabee and Asphodel in Co. of Peterboro'.
McKelvie, D.	New Liskeard.	Lake Temiskaming and tributaries.
McKenny, Thos.	Thornbury ...	Co. Grey, exclusive of the Tps. of Proton, Egremont and Normanby, with jurisdiction over so much of the waters of the Georgian Bay as lies in front of said county.
McMurray, R.	Bayfield	County of Huron.
McNairn, James ...	Iroquois	River St. Lawrence fronting on County of Dundas.
McPhee, D.	Uptergrove ...	Lake Simcoe, fronting on Tp. of Mara and the tributaries thereto, and for Mud Lake, in the Townsliips of Mara and Carden.
McVittie, James	Blenheim	Lake Erie fronting on Co. Kent, together with inland waters of said Co. tributary to Lake Erie.
Macdonald, Hector .	Beaverton ...	Lake Simcoe and tributaries thereto fronting on Tp. of Thorah,, in County of Ontario.
Major, William	Woodlawn	Townships of March and Torbolton, County Carleton.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Maltby, William	Nipissing	South River, and South Bay, with joint jurisdiction with any other overseer, or overseers who have been or may hereafter be appointed.
Mansfield, Thomas .	Pickering	Electoral District of South Ontario, exclusive of the Township of Reach.
May, J. C.	St. Catharines.	County of Lincoln and over so much of the waters of Lake Ontario as lies in front of the said county, and with jurisdiction over the Niagara River between its mouth and the Falls.
Maybee, Manly.....	Cameron P.O..	Sturgeon Lake, beginning at Day's Landing and running south for five miles, including McLaren's Creek, Sturgeon Point and Pleasant Point in Co. Haliburton.
Mayor, Harry	Painswick ...	Lake Simcoe, from Lovers' Creek, near Barrie, on Kempenfeldt Bay, to concession 10 of the said Township of Innisfil.
Merriam, Enoch ...	Harwood	Rice Lake, Townships Hamilton and Alnwick, between Close's Point and Rock Island and waters tributary thereto, County of Northumberland.
Myers, James	Orchard	Townships of Proton, Egremont and Normanby, County Grey, and Townships Minto, Arthur and West Luther, County Wellington.
Moffatt, George	Glencross	Townships of Mulmur, Mono and East Garafraxa.
Moore, F. J.	Lakefield	Townships of Douro, Dummer, east part of Smith, Tp. of Burleigh and east half of Harvey, Co. Peterboro'.
Moore, James A. ...	Trenton	That portion of Co. Hastings fronting Bay of Quinte from City of Belleville west to the Trent River as far as Trenton Junction, with joint jurisdiction over the waters of the Bay of Quinte between bridge at Belleville and Murray Canal.
Morton, John	St. Ola	Townships Limerick, Tudor, Wollaston, Cashel Lake and Grimsthorpe, County Hastings.
Nicholls, Peter	Bridgenorth ..	Chemong Lake, Lovesick Lake and Deer Bay, County Peterboro'.
Osborne, Henry	Dante	River Thames, between the Village of Lewisville and the easterly limits of Kent County.
Ostrom, B. B.	Frankford ...	The Trent River from its mouth to Chisholm's Rapids, and tributaries thereon, and to Trenton Junction.
Parker, H. B.	Bobcaygeon ..	In and for the Township of Verulam in the County of Victoria and the Tp. of Harvey in the County of Peterboro'.

LIST OF OVERSEERS.—*Continued.*

Name.	Residence.	District.
Parkin, C. W.	Valentia	Townships Mariposa and Ops, County Victoria.
Patterson, S.	Dunkerron ...	Holland River known as the north and west branches in Tps. Tecumseh, and West Gwillimbury, in Co. Simcoe.
Peltier, Theo.	Dover South..	River Thames from Lewisville to its mouth, also the tributaries of said river between these points; also the Township of Dover West, County Kent.
Phillips, J. H.	Smith's Falls.	County Frontenac lying north of the Townships of Kingston and Pittsburg, the Townships of North and South Crosby, Bastard, South Elmsley and Kitely, County of Leeds, and the County of Lanark.
Pilon, Phillippe	Sudbury	For the Townships of McKim, Broder, Dill, Neelon, Garson and Blezard in the District of Nipissing.
Poupore, A.	Bromley Line	For that portion of the River Ottawa lying between Allumette Rapids and Fort Coulonge.
Purcell, H. R.	Colebrook	Townships Camden, Sheffield, Kaladar and Barrie.
Raphael, J. C.	Mallorytown ..	Townships of Front of Yonge and Elizabethtown in the County of Leeds and over the waters of the River St. Lawrence fronting the said townships.
Rivet, Jos.	Sturgeon Falls	That portion of the District of Nipissing lying west and north of the Townships of Widdifield, Merrick, Stewart and Osborne, exclusive of Lake Temiskaming and its tributaries.
Robertson, C.	Hillsburg	Townships of Erin and West Garafraxa.
Robertson, D.	Southampton .	County Bruce fronting Lake Huron, lying between Southampton and Tobermory Harbor.
Robinson, T. W. ...	Collingwood ..	Townships Collingwood and Osprey, County of Grey, and the Townships of Nottawasaga and Sunnidale, County of Simcoe.
Robinson, Wm.	Kilworthy ...	Severn River and Sparrow Lake.
Russell, Wm.	Cornwall	In and for the Counties of Stormont and Glengarry, with jurisdiction over so much of the River St. Lawrence as lies in front of the said counties.
Sargent, W. J.	Bronte	County of Halton, also County of Wentworth north of the canal, and Lake Ontario.
Sinclair, N.	Glenarm	Balsam Lake, County of Victoria.
Slate, George	Rockport ...	River St. Lawrence between Jackstraw Light and Mallorytown Landing.
Small, John	Grand Valley.	Townships of Melancthon, Amaranth and East Luther, County Dufferin.

LIST OF OVERSEERS.— *Continued.*

Name.	Residence.	District.
Smith, J. S.	Port Rowan ..	For the County of Norfolk.
Smith, William	Gravenhurst .	Lakes Muskoka, Rosseau and Joseph, in the District of Parry Sound.
Spence, William ...	Athens	Charlestown Lake and its tributaries, County Leeds.
Stanzel, Fred.	Carleton Place	Townships Beckwith, Drummond, Ramsay and Pakenham in County Lanark, and Townships Fitzroy, Huntley and Goulbourn in County Carleton, with joint jurisdiction over the waters of the Township Drummond with any other overseer.
St. Charles, C.	Madoc	Townships Madoc and Huntington, County Hastings.
Stewart, James	Lanark	For Tps. Drummond, Lanark Darling and Lavant, in the Co. Lanark, with joint jurisdiction over the waters in the Township of Drummond.
Storie, R. B.	Escott	Escott Lake, in the Township of Front of Escott, County of Leeds.
Stuart, D.	Codrington ...	Trent River and tributaries, County of Northumberland, from Chisholm's Rapids to Percy Boom.
Switzer, W. H.	Gooderham .	Townships of Snowdon, Glamorgan, Monmouth, Cardiff, and Harcourt, District of Haliburton.
Tarry, A. E.	Toronto	Townships of Etobicoke, York and Scarboro, and for the City of Toronto, in the County of York, with jurisdiction over the inland waters of said Tps., and also over Toronto and Ashbridge's Bays, and so much of the waters of Lake Ontario as lies in front of the County of York.
Taudvin, J. W.	Kingston	For the City of Kingston, and for the waters fronting the County of Frontenac.
Taylor, Fred.	Huntsville ...	For the Townships of Stephenson, Stisted, Chaffey, Sinclair and Brunel, in the District of Muskoka.
Temple, Jas M.	Dorchester Stn	Thames River, easterly to the boundary line between Oxford and Middlesex.
Thurlow, George ...	Nairn Centre.	For the Townships of Merritt, Nairn, Lorne and Baldwin, in Dist. Algoma.
Tillett, R.	Roach's Point.	North York, with jurisdiction over Holland River and that portion of Lake Simcoe lying in front of North Gwillimbury and Georgina Townships.
Timlin, M.	Atherley	Lake Couchiching and tributaries fronting Townships Mara and Rama.

LIST OF OVERSEERS.— *Continued.*

Name.	Residence.	District.
Titus, E. A.	Wellington ...	For that portion of the Bay of Quinte fronting on Tp. Ameliasburg lying west of Belleville Bridge, also for the waters of Lake Ontario fronting on Tps. Ameliasburg and Hillier, with the exception of Village of Wellington, and including Weller's Bay, Consecon Lake, and all inland waters in said townships.
Toner, George	Gananoque ...	River St. Lawrence from foot of Howe Island to Rockport, and with joint jurisdiction with any other overseer or overseers over the Gananoque River from Gananoque to Marble Rock.
Toole, Ira	Omemee	Township of Emily, County of Victoria.
Townsend, J.	Long Point ..	Lyndhurst waters south of Lyndhurst; also South and Gananoque Lakes.
Traves, J. A., Sr....	Fraserburg ...	For the District of Muskoka, with joint jurisdiction with any Game and Fisheries overseers who have been or may be appointed over the District of Parry Sound.
Turner, S.	London	City of London, with joint jurisdiction over the County of Middlesex with any other overseer or overseers who have been or may hereafter be appointed.
Twamley, C.	Cavan	Townships Cavan and Manvers.
Vokes, James	Nanticoke ...	Townships Walpole, Rainham, South Cayuga and Dunn, County Haldimand.
Walker, R. J.	Port Credit ..	Lake Ontario, fronting County Peel, and for Rivers Credit and Etobicoke, tributary to said lake.
Wartman, H. E.	Portsmouth ..	For the Township of Kingston in the County of Frontenac.
Watson, Hy.	Toronto	Province of Ontario.
Watson, J.	Cæsarea	Townships of Cartwright and Manvers, the waters of Lake Scugog fronting on said townships and the waters tributary to said lake.
Watt, John	Peterborough .	River Otonabee and tributaries lying between the Canadian Pacific Railway Crossing in Peterborough and the Village of Lakefield.
Watts, Murdoch	Byng Inlet ...	River Magnetawan and for the waters of the Georgian Bay lying between the said river and French River.
West, Chas.	Holland Ldg. .	Joint jurisdiction along the east bank of the Holland River, through the Township of East Gwillimbury and along the shore of Lake Simcoe, through Township of North Gwillimbury in the County of York.

LIST OF OVERSEERS.—*Concluded.*

Name.	Residence.	District.
West, Geo. W.	Holland Ldg..	With joint jurisdiction along east bank of Holland River, through Township of Gwillimbury, and along the shore of Lake Simcoe, through Township of North Gwillimbury, in the County of York.
Wight, J. R.	Newboro'	For the Township of North Crosby extending to Smith's Falls on Rideau waters, together with the inland lakes and tributaries thereto.
Wigle, L	Leamington ..	Township of Malden, North Colchester, South Colchester, North Gosfield, South Gosfield and Mersea, in the County of Essex, with jurisdiction over so much of the waters of Lake Erie as lies in front of said Townships
Williams, J. T.	Penetang	Townships of Matchedash, Tay, Medonte, Tiny, Floss, County of Simcoe, and over Christian, Beckwith and Giant's Tomb Islands.
Wilson, H.	Elphin	Townships of Dalhousie and North Sherbrooke, County of Lanark.
Wood, John	Parry Sound .	Townships McKenzie, Hagerman, Burpee, Burton and Ferrie.
Wootton, E. A.	Maynooth	Townships of Bangor, Wicklow and McClure in Co. Hastings.
Worden, F.	Courtice	County of Durham.
Wornnoorth, F. L..	Arden	Townships Kennebec and Barrie, County Frontenac.
Wright, W. J.	Ice Lake	Kagawong Lake on Manitoulin Island, District of Algoma.
Younghusband, D. ..	South March .	Townships March and Nepean, County Carleton.

STATEMENT of Revenue received from the Game and Fisheries during the year ended October 31st, 1910.

GAME.	$ c.	$ c.
Trappers' Licenses	70 00	
Non-resident Licenses	7,875 00	
Resident Deer Licenses	18,884 12	
" Moose "	3,219 97	
Game Dealers' "	638 00	
Hotel, Restaurant and Club	167 00	
Cold Storage Licenses	50 00	
Guides' Licenses	1,702 25	
Fines	3,455 70	
Sales	2,842 85	
		38,904 89

FISHERIES.

District.	Name of Overseer.	Amount. $ c.	$ c.
Lake of the Woods and Rainy River District.	Blanchard, F.	208 00	
	Sterling, C. N.	1,223 00	
			1,431 00
River Nepigon	Leitch, P. A.	974 00	
			974 00
Lake Superior	Armstrong, F. C.	105 00	
	Calbeck, A.	1,387 00	
	Gordon, Walter	3,089 65	
	Jackson, H. T.	130 00	
	Johnston, Thomas	10 00	
			4,721 65
Lake Huron (North Channel)	Bradbury, J. R.	1,481 00	
	Dunn, E.	10 00	
	Graham, Wm.	136 00	
	Hall, A.	10 00	
	Hembruff, Joseph	68 00	
	Hunter, William	33 00	
	Irwin, David	6,680 00	
	Oliver, R. C.	452 00	
	Pitfield, George	235 00	
	Vincer, William.	17 00	
			9,122 00
Georgian Bay	Dusang, B. A.	638 40	
	Hewitt, James	29 00	
	Jermyn, J. W.	880 00	
	Knight, C. H.	30 00	
	Laughington, Henry	1,836 60	
	McKenny, Thos.	914 00	
	McKinney, R. J.	2 00	
	Robinson, T. W.	357 00	
	Williams, J. T.	299 00	
	Wood, P. V.	42 00	
	Wood, John	40 00	
	Watts, Murdoch	702 00	
			5,770 00
Lake Huron (proper) and River St. Clair	Blunden, H. A.	3,966 00	
	Eddy, Fred	69 00	
	Kehoe, Daniel	379 00	
	Karr, Richard	115 00	
	McMurray, Robt.	561 00	
	Robertson, D.	1,345 00	
			6,435 00
	Carried forward		28,453 65

STATEMENT of Revenue received—Continued.

District.	Name of Overseer.	Amount.	
		$ c.	$ c.
	Brought forward..		28,453 65
Lake St. Clair, River Thames and Detroit River.	Campbell, J. D.....	26 00	
	Chambers, Thos.	105 00	
	Chauvin, Victor	1,788 25	
	Crotty, John	18 00	
	Holman, Benj.	30 00	
	Laframboise, Remi.....	337 00	
	Little, Richard.....	632 00	
	Osborne, Henry	61 50	
	Peltier, Theo.....	620 00	
			3,617 75
Lake Erie and Grand River	Burt, William	48 00	
	Buckley, G. E.	2,234 00	
	Briggs, T. J.....	662 00	
	Eyers, Jacob.....	30 00	
	Ferris, W. P.	156 00	
	Greenwood, T. D.....	73 00	
	Henderson, H. A.....	1,970 00	
	Johnson, Henry	45 00	
	Jones, David	34 00	
	Lee, Edward.....	1,305 00	
	Matthews, H. E.....	36 00	
	McClennan, K.	4,020 00	
	McDonald, Allen	6 00	
	McVittie, James.....	7,198 00	
	McEwan, A.	3,525 00	
	Pierce, J. P.	87 00	
	Phemister, Geo.....	8 00	
	Smith, J. S.....	3,932 10	
	Vokes, James	3,666 00	
	Wigle, Lewis	7,040 00	
			36,075 10
Lake Ontario and Bay of Quinte.....	Brisbin, Angus.....	1,002 50	
	Bunting, C. E.	6 00	
	Conger, David.....	294 00	
	Dafoe, P. W.	7 00	
	Farrow, C. N.....	4 00	
	Fox, E. R.	991 00	
	Fowler, R. C.	547 00	
	Gault, Thos.	720 00	
	Hayes, Henry	131 00	
	Horning C. E.	88 00	
	Holliday, Henry.....	421 00	
	Huffman, E. M.	1,158 50	
	Johnson, John.....	25 00	
	Kerr, C. J.....	509 04	
	Mansfield, Thos.	50 00	
	May, J. C.....	827 00	
	Maughan, W.....	32 00	
	Murdoch, J. H.	275 00	
	Moore, Jas. A.....	94 00	
	Glass, Irvine	90 00	
	Morgan, H. M.....	22 00	
	Radcliffe, J. A.....	88 00	
	Reeves, H. J.....	100 00	
	Redner, J. W.....	4 50	
	Sargant, W. J.	281 00	
	Titus, E. A.....	414 00	
	Telfer, J. A.	128 00	
	Taudvin, J. W.....	560 00	
	Tarry, Albert.....	253 00	
	Worden, Frank	2 00	
	Carried forward...		68,146 50

STATEMENT of Revenue received—Continued.

District.	Name of Overseer.	Amount.	
		$ c.	$ c.
	Brought forward..	.....	68.146 50
Lake Ontario and Bay of Quinte.—Cont'd..	Wright, E.....	96 00	
	Watson, Henry.....	10 00	
	Walker, R. J.....	27 00	
			9,257 54
Counties Frontenac, Leeds, Prescott, Russell, Carleton, Renfrew, Lanark, Grenville.	Andrews, Samuel.....	14 00	
	Avery, Melzar	144 00	
	Barr, George.....	23 00	
	Birch, W. J.....	80 00	
	Booth, A. E.....	18 00	
	Bourgon, J. B.....	38 00	
	Botting, Peter	76 00	
	Briscoe, W. L.	19 00	
	Burns, D. E.	9 00	
	Burke, George	11 50	
	Covell, H. N.	1 00	
	Davis, J. W.....	65 00	
	Devine, John	9 00	
	Drew, Henry	47 00	
	Esford, Henry	116 00	
	Fisher, James	491 00	
	Fleming, John.....	40 00	
	Gates, George.....	5 00	
	Greene, Adam.....	10 00	
	Hunter, Capt. A.....	358 50	
	Kennedy, J. A.....	80 00	
	Loveday, E. T.....	86 20	
	Mallett, W. H.....	10 00	
	McGuire, John	727 00	
	Purcell, H. R.....	44 00	
	Phillips, J. H.....	355 10	
	Spence, William.....	90 00	
	Townsend, James	296 00	
	Wight, J. R.....	452 00	
	Wornnoorth, F. L.....	31 00	
	Wartman, H. E.....	31 00	
			3,777 30
Peterboro, Northumberland, Victoria and other inland counties.	Best, S. C.	30 00	
	Blea, Dan.....	6 00	
	Boyd, J. H.	16 00	
	Brownell, Thos.....	8 00	
	Burtcheall, C.	71 00	
	Bradshaw, A.....	12 00	
	Cassan, C. H.	148 00	
	Carson, R. W.....	78 00	
	Cheer, Thos.	393 00	
	Clark, Gordon.....	89 00	
	Clarkson, William.....	209 00	
	Colloton, R. B.....	12 00	
	Crump, C. J. C.	22 00	
	Crooker, Oscar.....	30 00	
	Fenety, E.	9 50	
	Fleming, E.....	2 00	
	Fielding, W.....	10 00	
	Gaudrie, E. W.....	6 00	
	Giffler, W. C.....	26 00	
	Green, John.....	37 00	
	Gunter, H.....	10 00	
	Gouldie, W.....	38 00	
	Hood, George	4 00	
	Howard, T.....	6 00	
	Hess, J. H..... ...	16 00	
	Howell, Jas.	9 00	
	Jones, John	60 00	
	Carried forward		81.181 34

STATEMENT of Revenue received—Concluded.

District.	Name of Overseer.	Amount.	
		$ c.	$ c.
	Brought forward..	.....	81,181 34
Peterboro, Northumberland, Victoria and other inland counties—Continued.	Johnston Thos. H.....	20 00	
	Jickling, Chas.....	9 90	
	Kent, A. J.	8 00	
	Killen, William	48 00	
	Lambkins, Richard.....	14 00	
	Langford, Newton.....	88 00	
	Lean, Wellington.....	6 00	
	Merriam, Enoch.....	54 00	
	Moore, F. J.....	542 00	
	Myers, James.....	5 00	
	Morton, J. W.	24 00	
	McAllister, J. R.....	125 00	
	McElwain, S. C.....	42 00	
	McArthur Bros.....	2 00	
	McIntyre, A. W.....	4 00	
	McKay, W. J.	60 00	
	McLean, A.	2 50	
	McRae, D.	10 00	
	Nicholls, Peter.....	72 00	
	Ostrom, B. B..... ..	4 00	
	Parker, H. B.....	510 00	
	Parkin, Chas. W.....	8 00	
	Robinson, W.....	396 00	
	Rice, M. A.	44 00	
	Stinson, F. S.....	44 00	
	Smith, Wm.	213 90	
	Toole, Ira.....	4 00	
	Taylor, F..... ...	20 00	
	Willmott, J. H.	261 50	
	Widdup, J.....	52 00	
	West, G. W.....	10 00	
	Weldon, J. O.	2 50	
	Watson, John	14 00	
	Watt, John	46 00	
			4,123 80
River St. Lawrence	Fraser, J. A.....	30 00	
	McNairn, Jas.....	2 00	
	Russell, William	15 00	
	Toner, George.....	135 00	
			182 00
Lakes Simcoe, Couchiching and Sparrow..	Coulter, Samuel.....	130 00	
	Green, Geo. G.	10 00	
	Leadley, Robt.	15 00	
	Mayor, Harry	1 00	
	McPhee, Donald.....	26 00	
	McGinn, William	77 00	
	McDonald, Hector	6 00	
	Timlin, Michael.....	10 00	
	Tillett, Robt.	20 00	
			295 00
Nipissing.....	Bailey, G. L.....	4 00	
	Bartlett, G. W.....	4 00	
	McKelvie, D.....	54 00	
	McDonald, S. C.....	1,022 00	
	Parks, G. M.....	254 00	
	Reid, C.	10 00	
	Rivet, Jos.....	30 00	
			1,378 00
Unclassified	Department.....	801 58	
			801 58
	Total Fisheries....		87,961 72
	Total Game		38,904 89
	Total.....		$126,866 61

Road Inspection in Peel County, near Orangeville.

ANNUAL REPORT

ON

Highway Improvement

Ontario

1911

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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To His Honour Hon. J. M. Gibson,

Lieutenant-Governor of Ontario.

May it Please Your Honour:—

I herewith beg to present for your consideration the annual report of W. A. McLean, Provincial Engineer of Highways, relating to Highway Improvement in the Province of Ontario.

Respectfully submitted,

J. O. Reaume,

Minister of Public Works.

Honourable J. O. Reaume,
Minister of Public Works, Ontario.

Sir,—I have the honour to transmit to you the report of the Highways Branch of the Public Works Department for the year 1910. Early in the year Mr. A. W. Campbell, Deputy Minister of Public Works, who had devoted many years to the study of good roads, and who had been in charge of the work of highway improvement in Ontario since the year 1896, left the Provincial service to assume the important position of Deputy Minister of Railways and Canals for Canada. Mr. W. A. McLean, who had been associated with Mr. Campbell as Engineer of the Highways Branch from its inception, has continued the work with great skill and energy. He is an engineer of ability, has had a long experience in road building, possesses a knowledge of all details of highway work and of the administration of The Provincial Highway Improvement Act.

Much valuable information has been gathered from many sources and is embodied in this report, and cannot fail to be of service to all persons interested in road-making.

Information has been distributed in many ways by the Highways Branch. Mr. McLean has visited many sections of the Province, and has given instructive addresses to municipal organizations, both town and country, and other associations who are taking an interest in the development of the Province, particularly along the lines of good roads. Bulletins have been issued, and advice given by mail to municipal officers and others who apply to the Highways Branch for information.

The road-building and landscape work at the Provincial Prison, now being erected at Guelph, has been directed by the Highways Branch in an efficient manner.

A perusal of this report will be found most interesting and instructive.

I have the honour to be,
Sir,
Your obedient servant,
R. P. Fairbairn,
Deputy Minister of Public Works.

To the Honourable J. O. Reaume,
Minister of Public Works.

Sir,—I have the honour to transmit to you the annual report on road, street and bridge construction in Ontario, having special reference to the work carried on by the several counties of the Province during the year 1910 under the Act to Aid in the Improvement of Public Highways.

I have the honour to be,
Sir,
Your obedient servant,
W. A. McLean,
Provincial Engineer of Highways.

Parliament Buildings, Toronto,
March 1st, 1911.

ANNUAL REPORT

ON

HIGHWAY IMPROVEMENT

By W. A. McLean, C.E., Provincial Engineer of Highways.

Modern methods of travel, transportation and communication are among the most prominent results of invention, and distinguish the present age from all others as an era of rapid transit. Every refinement has been sought, and vast expenditures have been made on steam and electric railways, ocean and lake steamship lines, harbours and canals, express, postal, telephone, telegraph and cable services. It is notable, therefore, that methods of building and maintaining the public highways, the roads of every day use leading to homes of the people, and therefore of the most universal use and benefit, have until recently been, or continue to be, of the most primitive character. In road improvement lies one of the greatest opportunities for material advancement, a work which the Highway Improvement Act is substantially encouraging.

It is generally conceded that, comparing the progress of Ontario in road building with that of other countries, the standard of roads is extremely low, and that what should be one of the greatest pleasures of farm life, a country drive, is too often a hardship. This is true in spite of the fact that we are spending large sums annually on the repair of these roads. During the past twenty years there has been spent on the township roads of Ontario by township councils alone, over $19,000,000 in cash and over 22,000,000 days of statute labor—an aggregate exceeding in value $40,000,000. It is true of the greater part of Ontario that the township roads are to-day little, if any, better than they were twenty years ago.

To estimate broadly the value of good roads, it can be stated that good roads would cut in two the time now spent in marketing produce, and in driving on the roads for all purposes. They result in increased land value, lessened cost of transportation, improved marketing facilities, and the extension of social privileges, largely overcoming the present isolation of farm life.

County Road Expenditure in 1910.

During the year 1910 there were seventeen counties operating under the Highway Improvement Act.

These were: Carleton, Frontenac, Halton, Hastings, Lanark, Leeds and Grenville, Lennox and Addington, Lincoln, Middlesex, Oxford, Peel, Perth, Prince Edward, Simcoe, Waterloo, Wellington, and Wentworth.

Expenditure under the Highway Improvement Act in 1910 amounted in all to $553,312.61 of which the municipalities paid $368,875.07, and the Province the remaining one-third, or $184,437.54. Thus the effect of the Act is quite clear with regard to a point upon which enquiry is frequently made, that the Province contributes one dollar for each two dollars raised by county rate.

Analysis of the expenditure in 1910 shows the following result:

Road construction	$367,191 88
Permanent bridges	110,540 28
Superintendence	18,564 15
Machinery, plant, etc.	32,198 48
Special grants to townships, towns and village roads	22,717 82
Toll roads	2,100 00
Total	$553,312 61

The roads metalled amounted to 300 miles, of which 155 miles were surfaced with broken stone, and 145 miles with gravel.

The total expenditure under the Act from 1902 to the close of 1910 has been as follows:

Road construction and supervision	$1,790,253 91
Permanent bridges	476,765 49
Machinery, plant, etc.	145,743 32
Special grants to townships, villages and towns.	112,674 84
Toll roads purchased.	155,997 98
Total expenditure	$2,681,435 54

Of the foregoing total expenditure of $2,681,435.54 the Provincial contribution under the Highway Improvement Act has been one-third, or $893,811.84. Of one million dollars set aside by the Legislature in 1901 under the Highway Improvement Act there remains, after meeting payments for the work of 1910, the sum of $106,188.16; which sum will not be sufficient to meet the Provincial obligations to be incurred by work now in progress for the year 1911.

EXPENDITURE BY COUNTIES.

The following schedule shows the total expenditure to the close of the year 1910 according to counties:

County.	Year of commencement under Highway Act.	Total length of county system, miles.	Expenditure under Act in 1910.	Total expenditure to end of 1910.	Government aid to end of season of 1910.	Government grant for 1910.
			$ c.	$ c.	$ 1.	$ c.
Wentworth	1902	140	23,341 80	369,658 88	123,219 63	7,780 60
Lanark	1903	98	13,889 48	159,282 08	53,094 02	4,629 83
Simcoe	1903	427	22,305 50	406,101 80	135,367 31	7,435 17
Wellington	1903	170	36,644 92	159,624 53	53,208 15	12,214 97
Lincoln	1904	36	10,269 06	73,092 78	24,364 26	3,423 02
Oxford	1904–07	256	59,767 32	338,761 27	112,920 42	19,922 44
Hastings	1904	472	62,203 91	205,823 03	68,607 66	20,734 63
Peel	1906	102	89,691 35	203,167 78	67,722 60	29,897 12
Middlesex	1906	220	28,168 26	156,039 32	52,013 10	9,389 42
Lennox and Addington	1906	169½	17,049 54	86,578 99	28,859 66	5,683 18
Prince Edward	1907	122	40,560 24	130,630 84	43,543 61	13,520 08
Halton	1907	189	37,806 11	109,752 70	36,584 24	12,602 04
Perth	1907	210	19,387 15	113,353 04	37,784 34	6,462 38
Frontenac	1907	127	11,690 68	56,366 61	18,788 87	3,896 89
Waterloo	1908	175	22,475 58	55,140 18	18,380 06	7,491 86
Carleton	1909	220	29,271 05	.....	9,757 02	9,757 02
Leeds and Grenville	1910	247	28,790 66	.....	9,596 89	9,596 89
York	1911	114	none	.....	.....	.....
Haldimand	1911	125	none	.....	.....	.....

Cost of Roads.

Inquiry is frequently received as to the cost of roads, and the impression is general that a definite expenditure can be stated. The cost varies greatly, and each mile of road is a separate problem. For example, among the factors commonly affecting the cost are the following:

(1) Skilled management will decrease the outlay, while careless management will increase it. Under one superintendent the work may be done for one-half of what it would cost under another.

(2) Very little grading and earth-work is required in some cases, while in others considerable is needed to turnpike the road, drain, and to cut hills.

On the "Eaton" Road near Islington.
This road is a part of old Dundas street, a main highway between Toronto and Hamilton. It was built by the T. Eaton Company as a model road at a cost of $6,000 per mile, and is maintained at their expense. Owing to heavy motor traffic the road is oiled as required.

(3) A weak sub-soil or heavy traffic may require an expensive foundation, while many old gravel or stone roads may only need a surface coat.

(4) Metal may have to be shipped in by rail, while in other cases it may be quarried from the road allowance or adjacent fields. The length of wagon haul is an important factor.

(5) Tile drainage may or may not be necessary.

(6) The price and efficiency of labor varies in different localities, and from period to period. With the advancing wages of the past few years, the cost of roads has been steadily increasing.

(7) Certain classes of traffic require a stronger surface coating than do others.

If regard is had to the necessary variation in cost as shown by the foregoing instances, averages may be stated without being misleading. In a general way,

the county roads now being built show a cost proportionate to the width of metal. Gravel roads are usually built of metal teamed not over two or three miles, and the cost is about $100 per mile for each foot in width of gravel. Thus when gravel is put on nine feet wide, the cost is about $900 per mile; and when ten feet wide, $1,000 a mile. Broken stone roads cost about $200 per foot of width of metal; or $1,800 per mile when substantially stoned nine feet wide, or $2,000 for ten feet wide. When the stone is brought in by rail, the cost may be placed at $300 per foot of metal, or $2,700 for a mile of road nine feet wide, and $3,000 for a mile of road ten feet wide.

Ontario Road Laws.

The resumé of foreign road laws contained in this report gives the more important features of road systems in Europe, the United States and Canada. A perusal will indicate that, while Ontario has not adopted the most extreme system of centralization and state control, nevertheless the Highway Improvement Act under which the Province contributes one-third of the cost of building main roads, is a creditable measure, and in advance of the majority of state laws in the United States. With the exception of New York, Massachusetts, Pennsylvania and California, the Provinical law of Ontario will be found to compare favourably with State legislation. A Provincial grant of one-third of the cost, is of substantial assistance to county councils in the construction of roads as now commonly built.

Briefly outlined, Ontario laws provide that all roads, within any local municipality, whether township, village, town or city, are under the jurisdiction of and a charge upon the local council for construction and repair.

All country roads are primarily under the control of township councils to be maintained by statute labour, and such amount of money as may be raised by a levy on the township assessment.

Township councils have the power, with or without a vote of the rate-payers, to commute statute labour, or to abolish statute labour. In the latter case, road maintenance is a charge on the general funds of the township, the appropriation to be levied in the same way as other township rates.

The Act to Aid in the Improvement of Public Highways provides that a county council may, by by-law, assume a system of county roads. The county council determines the roads to be so assumed, but the by-law, with an estimate of the cost of proposed improvement, is subject to approval by Order-in-Council through the Minister of Public Works. Having been so approved, the county is entitled to receive one-third of the county's expenditure on construction. The Government grant is payable to the county at the close of each year, as the work progresses. The roads assumed should be leading market roads, such as will best serve local requirements, but should form a connected system as far as practicable. The Act makes provision for exceptional conditions, by permitting the county to make special grants to municipalities not equally benefited by the county road system. The work done on the roads is under the direction of the county council, subject to the regulations of the Department of Public Works with respect to highways.

Through a misconception of the Highway Improvement Act, there is frequent application for aid to individual townships or for certain roads, on the basis now applicable only to county road systems.

While aid to minor municipalities is at first sight desirable, yet experience has shown both in Ontario and the United States that a limited expenditure can be

Concrete Bridge over the River Speed, at the new Central Prison Farm, Guelph.™ Built by prison labour in 1910-11; total length, 160 feet; width of central span 50 feet, and two end spans of 20 feet each.

more effective when applied to the broader sphere of county control than if scattered in disconnected improvements.

There are numerous reasons for this policy being followed, and the matter has been thoroughly considered by those who have made a study of the good roads question. It is agreed that townships could not afford to supply themselves with the necessary roadmaking machinery; that they cannot provide the most effective organization, since their works and improvement would be of such short duration that they would be finished before an efficient organization would be created; that townships could not retain the services of a first-class engineer or superintendent; that townships could rarely devote to construction a sufficient sum for permanent work, owing to local influences demanding small improvements on all roads; and that township councils having control of all roads cannot, after construction, apply sufficient expenditure for maintenance, owing to the local feeling that all roads should be of equal quality.

Experience under the county road system has shown conclusively that better results can be had where the system of management is removed from local influences, such as arise in township control. When under the close control of councillors, there is a tendency to carry on the work so as to make votes for themselves, rather than to build roads. While county road systems and Government aid to road building results in work of a substantial kind, yet perhaps the chief object to be attained is to instruct the people that such improvement can be carried on only by thorough and efficient organization. This object would be wholly lost sight of were aid given to minor municipalities. Owing to varying local interests, it is difficult, and in cases, impossible, to get adjoining counties to unite their designated county roads, and this would be much more difficult to accomplish in the case of townships and other small municipalities.

Motor Traffic.

The use of motor vehicles is increasing in the Province, and while complaint continues with regard to the disturbing conditions created thereby, there is a greater tendency on the part of the users of horses to accept the motor vehicle as one which has come to stay, and the inconvenience as a matter to be treated as a necessary evil; but one to be minimized as much as possible. The more responsible motorists have exerted their influence, with a great measure of success, in lessening the inconsiderate use of the highways, while it is, in general, recognized that horses are becoming accustomed to automobiles.

A noticeable feature is that the use of motor vehicles is not now confined to residents of towns and cities, but that farmers (several hundred) are using them. It is reasonable to expect that ultimately their greatest sphere of usefulness will be in the farming community, where long distance country travel is a matter of daily necessity. The obstacle to general use is the price, but it is anticipated that as these machines become standardized, the cost will be reduced as with bicycles and similar inventions, and that the automobile will become a most valuable addition to farm life, as it has already become serviceable to other occupations.

The principal fact to be faced in this regard is that motor vehicles tend to concentrate their traffic on main roads; that a dust nuisance in an intense form is created, and that the ordinary type of water-bound macadam and gravel road is subjected to severe wear by this constant traffic, especially that of heavy touring cars travelling at high speed. While the limitation of speed is in some degree necessary, the greater experience of England, France, and many of the American

States has led to the taxation of motors and the construction and maintenance of main country roads adapted to this form of traffic, rather than to the placing of speed restrictions which are difficult and at times impossible to enforce. The oiling of roads is a simple treatment, adaptable to roads where traffic is not too severe, but the greater tendency is toward the building of roads bound with tar, asphalt, or other material which prevents the forming of dust, strengthens the road and reduces the cost of maintenance; a more extended description of these materials and forms of construction being elsewhere given in this report.

Road Maintenance.

It cannot be regarded as good economy to build roads without making suitable provision to maintain and to keep them in a proper state of repair. Municipalities undertaking the construction of good roads should carefully face this responsibility. It is not one of an alarming character in point of cost, any more than is the cost of construction: for it has been found that a system of main roads can be built and maintained in any community without burdensome taxation. But there is a tendency on the part of councils to disregard maintenance, which can only result in unnecessary public loss, since a judicious system of constant repair is much less expensive than early reconstruction following upon neglect. A system of continuous maintenance should be adopted in every county whereby roads will be repaired as soon as holes or wheel tracks commence, so that the more rapid wear of rutted and uneven road surfaces will not follow.

By placing one man on a section of road, with cart, horse, a pick and pounder and a few simple tools, with a quantity of broken stone at his disposal, roads can be systematically maintained for all time in good condition. Similar results follow from keeping a crew of men constantly engaged under a superintendent, working systematically over a fixed mileage of road, with a steam roller, grader, and the necessary road metal for resurfacing. Important parts of maintenance are the cutting of grass and weeds on the roadside, the annual cleaning of ditches, and removing the shoulders that are continually forming at the edges of the road from the accumulation of dust.

York County Roads.

The York County road system recently established under the Highway Improvement Act is, by a special Act, confined to the southern half of York County and comprises about 114 miles of main highways radiating from Toronto. By a popular vote of the ratepayers, and under special legislation, the City of Toronto will contribute $100,000 to the work. The total estimated cost is $300,000, of which the Province will pay the usual proportion, or $100,000, so that the charge upon the county is an equal amount, or $100,000.

Among the reasons for Toronto's contribution, it was urged that the building of good roads would greatly aid in the development of the surrounding country; that farm produce would be brought into the city more cheaply; that it would be less injured than by transportation over rough and dusty roads, and that the cost of such produce would be reduced to the consumer; that the general experience following the construction of good roads has been that farms are subdivided, are cut up into smaller holdings, and are more thoroughly cultivated; that good roads surrounding a town or city will make it a more desirable and attractive place of residence; that good roads would facilitate trade between Toronto and the surrounding community to the advantage of the city.

The work is now in progress, and is largely being carried out by contract. By a supplementary agreement, owing to the exceptional conditions, the adminis-

tration is placed in a commission of six members, three being appointed by the County, two by the City of Toronto, and one by the Provincial Government; the work being, however, subject to the usual Government regulations and supervision. The members of the Commission are: Messrs. W. G. Trethewey, for the Province; D. H. Clarke and Controller J. J. Ward, for Toronto; and Geo. S. Henry, W. H. Pugsley and J. J. Bull, for the County. The Warden of York, Mr. J. J. Bull, is member *ex officio,* and is Chairman of the Commission. Mr. E. A. James, C.E., with offices at 57 Adelaide Street east, Toronto, is engineer for the County Road Commission.

Technical Training for Road Engineers.

A definite technical training in road construction is a growing need in association with Schools of Engineering. Roads and streets are the first works to be undertaken through municipal organization, their universal use has led to the general feeling that no skill is needed in their construction, and this in turn has brought about a great misuse of public money. A better understanding of the situation is steadily growing, and a demand for engineers experienced in road-building has arisen.

It is greatly in the public interest that trained road builders should be employed, and to encourage this, it is a necessity that engineers should be so educated that they can immediately prove the value of their services when opportunity arises.

In European countries wherever good roads are built, engineers are employed for their supervision. In France, L'École Nationale des Ponts et Chaussées is maintained by the national government, and from it their large corps of highway engineers is drawn. Students, who are nominated by the President, receive a training extending over three years, in all details of highway engineering. In Switzerland, road engineers are required to have diplomas from a national college of highway engineering. In England and Germany, public opinion demands that roads shall be under the direction of engineers of recognized standing. The United States Office of Public Roads at Washington is giving a one-year post-graduate course in highway engineering, in which graduate engineers may receive theoretical and practical training. Road building courses have been established in State Universities of New York (Columbia), South Carolina, Washington, and Alabama.

The theory of road building is neither difficult nor extensive. The fundamental parts are now included in all engineering courses. Bridge design, a division of highway engineering, is fully covered. But there is a need that, as mathematics and strength of materials are taught to students through bridge design, so the rudiments of road building and paving, including physics, chemistry, geology, etc., should be brought before them in a practical way by a study of their application to road building and paving. A course of lectures covering accumulated experience respecting all forms of pavements and roads, and details of construction; together with a laboratory for the testing of materials, would render valuable service to the Province.

Experimental Roads.

Arrangements have been entered into with the commissioners of the Queen Victoria Niagara Falls Park whereby, in the construction of the boulevard from the Park to Fort Erie, experimental sections of roadway will be built. A suffi-

cient sum has been set apart by the Park Commissioners for the purpose, and the work will be carried out in co-operation with this office. Records of construction will be kept, the results carefully observed and published. Much practical information should be derived from this source.

Road-building is largely influenced by climate, and the local materials available. In the absence of skilled road supervision and careful observation such as has characterized countries which have well developed systems of highways, there is a serious lack of data needed in the construction of the better class of roads most suitable to Canada. The service rendered by the Park Commission in this respect should be most valuable to the Province.

Experiments proposed on the Park Boulevard as being of general use will, as far as practicable, relate to the following:

The Niagara Boulevard. A Completed Section of the Roadway.

(1) *Stone.* Sections of ordinary water-bound macadam, using stone from various quarries in Ontario, together with a section of gravel and of slag, if suitable qualities of the latter can be obtained.

(2) *Bituminous Binders.* Sections of road bound with Trinidad, Bermudas, Texas and other asphalts; also tar distilled and mixed with proper proportions of pitch and creosote oil.

(3) *Dust Prevention.* Sections of waterbound macadam, treated with asphaltic and paraffin oils, tar and any proprietary or other materials of probable value for dust-laying or road preservation.

(4) *Foundations.* Sections showing the relative durability and strength of various foundation materials, such as gravel, macadam, Telford, field stone (Massachusetts design), and slag.

(5) *Thickness.* Sections in which the thickness of foundation and surface stone are varied.

(6) *Drainage.* Sections giving various plans of tile drainage, especially in clay soils.

As the necessary observation of these different types of construction should extend over a period of years, permanent marks will be placed at the ends of each section, and numbered so that no future uncertainty may arise. The length of sections to be followed need not be the same in every case, and may vary from 300 to 500 feet in length, but will be controlled to some extent by the expenditure available. Traffic over this road, when completed, will, it is expected, correspond very closely to that of main county highways.

Municipal Procedure.

The increasing expenditures and responsibilities of municipal councils has approached the stage in this Province, in which the full confidence of the public and of the ratepayers must be maintained if the co-operation possible through municipal organization is to reach its full degree of usefulness.

Municipal councillors in making important appointments, purchasing machinery, letting bridge contracts and transacting other important business could profitably adopt a standard of English, Scottish and Irish procedure, where the general rule regarding applicants for municipal contracts, appointments and tenders, is that any contractor, applicant, or tenderer approaching an official, or canvassing any member of the Council, Board, or other body, is absolutely disqualified from tendering, contracting, or competing for an appointment. There is no law on this point, but it is a general rule adopted by nearly every public body. A municipal councillor would not be disqualified by permitting himself to be approached otherwise than in open council.

Annual Financial Statements.

Financial statements giving the itemized expenditures of township municipalities are required by the Municipal Act to be published annually before the close of the year. Such a statement, when properly used, gives the ratepayers information to which they are entitled, and is a desirable safeguard. The requirement could reasonably be extended to counties, particularly those carrying on systems of county roads, where the annual outlay is of a considerable amount.

The Log Drag.

The log drag is capable of much usefulness. Ontario is just beginning to enter seriously upon the work of road construction. All roads cannot be macadamized or gravelled at once; but on the contrary, the task of properly constructing even the main roads is one which must take a number of years. A starting point in permanent road-building is necessary, and this is afforded by county road systems which form a nucleus, and which will no doubt be extended. But there will remain for many years in most counties a large network of earth roads not even gravelled in the ordinary township manner. Township councils could do no better work than to carry out the grading of these earth roads, and afterwards maintain them in this condition by the systematic use of the log drag. Spasmodic and casual use will accomplish little.

While these implements are cheaply made and easily operated, farmers will not of their own good-will at once go out on the roads and keep them in repair. Township councils will have to take the matter up. If their use is still left to

The Hamilton and Ancaster Road, Wentworth County. Built in 1909.

ordinary statute labor methods, permitting a farmer here and there, who desires it, to work out his statute labor by this means, the result will be inferior. A business-like system must be introduced. One to be recommended is:

1. That township councils take tenders and let the job of dragging and keeping in good condition, sections of earth road throughout the township; these sections not to exceed four miles in length, being preferably two miles in length and not less than one mile.

2. That each person taking a contract be paid in cash the sum of his tender, which will probably be a small amount. An average of $5 per mile would be an inducement in most cases.

3. The work of those using the split-log drag should be inspected from time to time by the township road commissioner. When any person operating the drag is found to do inferior work or to neglect the roads, the work can be taken from him for the ensuing year.

Farm Entrances.

The Statutes do not impose upon municipal councils the cost of maintaining private entrances to farm residences and lands, and these have heretofore legally and by custom, been built by the several property owners. In building and reconstructing roads it is frequently necessary to deepen or enlarge drains so as to necessitate culvert entrances, to tear out present entrances, and to put owners to the trouble and expense of making new crossings.

This is often accepted in good part by the ratepayers affected who realize the benefit of the better road past their property, and suitable entrances are made. Too frequently, however, property owners block the drainage at their gates, by using inferior drain crossings, using tile that are too small, or on the wrong grade, even rolling into the drain logs or stones, or filling it with earth. In this way serious injury results to the roads, and it operates very unfairly as regards the general public who pay for the roads, and the more progressive citizens who put in sufficient crossings at their gates.

Rather than permit the consequent injury to the roads from the obstruction of drainage, it would generally be in the interest of the municipality to put in the drains at the public cost. An equitable method, however, where property owners fail to put in satisfactory gateway entrances and obstruct drainage, would be to permit the municipal council, after due notice, to construct the crossing, making it a charge on the property benefited, to be collected with the general taxes.

Common Defects.

The most common defects in municipal road-work are in matters relating to grading, draining, poor road metal and rolling. Statute labor has been a poor instructor in these details, and road-builders are not yet controlled by a well educated public opinion, as in England, France or Germany, where the public ideal of roads is exacting.

Led by the methods and results of statute labor, road-makers and the public are too often satisfied with an impressive line of loose gravel or broken stone scattered along a road allowance. It is easier to haul gravel and stone, and drop it on a road than to put into it the necessary work and thought needed for good grading and draining.

Grading and draining are the first steps to permanent roads, and are the cheapest part of the work, but are the most neglected. Good grading and drain-

ing will do more and show more for the expenditure than will several times the outlay on the ordinary class of gravel and stone. Good grading means that the foundation earth work will be well turnpiked and crowned; that hills will be cut and low spots filled to a permanent level with easy flowing lines. Good draining requires tile where the sub-soil is wet or retentive; and open drains of sufficient capacity with constant fall and free outlet. The present so-called drains are generally a succession of pools without an outlet.

The use of inferior gravel is a common fault—gravel that is dirty, sandy, too fine, or having a quantity of stone too large to make a smooth surface. Good gravel is a useful road metal, but in a pretense of drawing gravel, a large amount of money is wasted every year in putting sand, clay and boulders on the roads.

Municipalities still continue to waste their road work by covering old gravel and stone roads by drawing in sod and clay from the sides to crown the roads. Miles of road are every year destroyed in this way. Old gravel roads should be restored by cutting away the sod shoulders and turning them outward; then crowning the surface with a sufficient application of new material. To put earth and sod on top of gravel and stone is an attempt to build a road up-side down.

The day when good roads can be satisfactorily built without a steam roller has passed. Rolling is a means of ultimate economy in stone road building, though adding slightly to the first cost. The rolled stone road is stronger, better to drive on, more lasting and requires less repair than when built in the old loose-stone way. Roads are built in long sections under the Highway Act, and stone left loose for a mile or more is an obstruction to travel that cannot be sanctioned by the Highways Department.

Wide Tires.

The use of wider wagon tires should accompany the construction of good roads. When a large expenditure is made in road improvement it is only reasonable that this outlay should be protected by preventing excessive and unnecessary wear from narrow-tired vehicles carrying heavy loads. Narrow tires grind, cut and destroy the road surface, but wide tires help to roll and bond it, doing good rather than harm.

Tests and experiments show that on all classes of road except those which are very rough or are deep with mud, wide tires make traction easier. When it is considered that, with wide tires in universal use, the number of muddy and rough roads would be much less, (since they are too often the result of narrow tires) their advantage would be very great.

The common tire width at present is one and one-half, or two inches. It is self-evident that such a wheel carrying a load of from one to two thousand pounds, and continued in a narrow track from day to day in all kinds of weather, constitutes a serious menace to the best of roads. To properly protect the roads, wagon tires should be proportioned to the weight the vehicle is designed to carry, and might reasonably vary from three to six inches.

The Council of Prince Edward County has enacted a by-law, providing that wagon tires shall have a minimum width of three inches. The by-law is as follows:

4 *By-Law for regulating and enforcing the width of tires that must be used on vehicles when travelling upon County gravel or Macadamized roads (As amended.)*

Whereas the County Council of the County of Prince Edward have established a County Road System and built Gravel or Macadamized Roads throughout the County in connection with the said System.

Whereas to preserve the said Roads, it is desirable to enforce and regulate the width of tires that must be used upon vehicles when travelling upon the aforesaid roads with loads.

Now the County Council of the County of Prince Edward enacts as follows:

1. That, pursuant to Section 584 of the Municipal Act, on or after the first day of September, 1911, it shall be unlawful for any person or persons to drive or propel any vehicle, the weight of which, with or without a load, is more than 3,000 pounds including the vehicle (the onus of proof of the weight shall be upon such owner or driver) over the said County Gravel or Macadamized Roads or any part thereof, unless said vehicle has tires of the width of not less than three inches.

2. For any wilful violation of this By-law a fine not exceeding twenty dollars and costs may be imposed upon the owner or driver of such vehicle, upon Summary Conviction before any Justice of the Peace or Police Magistrate, and in default of payment of said fine and costs, the same may be enforced by distress against the said vehicle or any other property belonging to the said owner or driver.

Passed the 15th day of September, 1910.

(Signed) D. H. FRASER,
Warden.

(Signed) E. M. YOUNG,
Clerk.

Bridge Specifications.

Bridges and culverts, formerly built of timber, are to-day being built of steel, of concrete, and of concrete reinforced with steel, while stone arches are occasionally employed. In the substructure, abutments and piers, concrete, or stone masonry, is generally used. At the recent Session of the Legislature an Act was passed, Section 13, Chapter 57, 1 George V., by which Section 618*a* of The Consolidated Municipal Act, 1903, as enacted by section 25 of the Municipal Amendment Act, 1907, was repealed and the following section substituted therefor:

"618*a*. Every iron, steel, concrete or stone bridge constructed by or under the jurisdiction and control of the corporation of a county shall be built in accordance with specifications approved of by the Engineer of Highways of the Department of Public Works of Ontario."

This provision is timely inasmuch as, at present, numerous old wooden bridges are failing and are being re-built. The use of the more permanent materials will result in ultimate economy, but to this end there is urgent need that councils should have a clear understanding of the situation.

A large number of inferior steel bridges have been built throughout the Province due largely to the method followed by municipal councils in awarding con-

tracts. In the past, wooden bridges of a serviceable kind have been built without engineering supervision. This was reasonably satisfactory, for the quality of timber was a matter of common knowledge, and the framing of a bridge a work that a carpenter could undertake.

Steel is a vastly different material from wood as regards quality, design and fabrication. The public and municipal councillors have been loth to recognize the fact that steel is a material demanding the services of a competent engineer versed in the details of steel construction, and the calculations that have to be made. A specification for a steel bridge is necessarily intricate and cannot be simplified to the plane of every-day knowledge. Every municipal council contracting for the erection of a steel bridge should engage the services of an engineer to act in the interest of the municipality.

The argument sometimes is advanced that the municipality can save the fee of an engineer "by allowing the bridge company to do the engineering for the municipality," on the theory that a company of standing has its reputation to maintain and will therefore see that the work is properly done. This is true to a limited extent only. For instance, the material may be good, and the shop work excellent, but bridges are usually put up by foremen, whose chief object is to "get the job done," and careless erection will largely discount the best intentions of the company. In a similar manner, hurried designing frequently permits errors of a serious kind in plans, and careful checking is absolutely necessary for safe results.

But councils who trust to the reliability of the bridge company seldom use discretion in this regard, and too often award the contract not to the best company, but to the lowest tenderer. They cannot properly judge the merits of the several plans and specifications offered, and the work is given to the contractor who is willing to build the poorest bridge for the least money.

It should be the duty of the municipal engineer to determine the special requirements of the bridge, and the most suitable type of bridge, combining this with the general bridge specification prepared by the Provincial Engineer of Highways, in such a manner that all contractors will tender on a uniform basis; to advise the council as to the merits of the several tenders, and to then see that the specification is enforced. He should prepare plans and specifications for the substructure and see that they are satisfactorily carried out.

A large capital expenditure involving heavy depreciation and a large charge for maintenance is being put into highway bridge construction in Ontario. Railway corporations employ a large organization and staff for designing and caring for their bridge investment, though not more important than that of Ontario municipalities.

Equal precaution on the part of councils is a necessity if the best public interests are to be served. The number of steel bridges in the Province that are too light, badly designed, poorly riveted, carelessly erected, and rapidly rusting to ruin for lack of painting, is already too numerous.

The Act requires that bridge specifications be approved by the Provincial Engineer of Highways. To this end standard specifications have been prepared, but these cannot cover the details of a special character necessary to adapt every bridge to the site it is to occupy. These, while subject to the approval of the Provincial Engineer of Highways, must necessarily be prepared by a local engineer, who will also see that the specifications are carried out by the contractor.

A Steel Bridge of Good Type.

Over the Credit River in Toronto Township; span 90 feet; cost $2,850, including the concrete floor.

RECENT DEVELOPMENT IN ROADBUILDING.

Country roads, as with city streets, are not all of one kind. On the contrary, there is a wide gradation, and varying local conditions with regard to traffic, materials, and general design, must be adapted to one another. One strength of pavement is suitable for the heavy dray traffic of a wholesale district in a large city; another type is suitable for a lightly travelled residence street; and still another for a city park. In the same way country roads should be adapted to the factors which present themselves. There cannot, economically, be a standard specification for a country road, to be followed universally. The problem, at times, is a complex one, if the best combination of efficiency and cost is to be served. New materials are from time to time presenting themselves, which have to be tested under a great many conditions, and for a considerable period in order that their value and place in road-building may be determined. The character of traffic is subject to change, and at present, rapid motor vehicles, and heavy traction engines are adding their energies to narrow tires, frost and weather as agencies of road destruction.

In general, it may be said that gravel roads are suited to light driving, broken stone resists more constant and heavier travel, oils and bituminous binders help to preserve these, and concrete and vitrified brick are employed on heavily travelled suburban roads near large cities. Foundations of various kinds are used according to the weight of traffic, and the natural strength of the subsoil.

Roads adjacent to, and radiating from large cities, are frequently subjected to heavier traffic than are many expensively paved city streets. On leading suburban roads is concentrated a large amount of farm traffic from the surrounding districts. Some is only occasional during the year; miscellaneous loads come in at weekly or other regular intervals; while some, such as heavily loaded milk wagons, are of daily occurrence. On some of these roads brick, gravel and sand are regularly hauled in heavy loads; and outlying factories create heavy traffic in certain cases. Heavy loads of merchandise are daily hauled away from the wholesale houses of the city, delivery wagons make regular trips; while additional light driving and automobiles make a total amount of travel that subjects leading suburban roads to a severe traffic test.

Common gravel, even of a good quality, ruts readily in such roads, requires constant repairs, and invariably in the fall and spring is flattened and cut up so that a dry surface is impossible. Broken limestone is plentiful in eastern Ontario, and is being used for heavy traffic, but even this material, laid in the ordinary way as water-bound macadam, is not strong enough for severe wear. It is almost impossible to prevent vehicles following one another in a narrow wheel track, and this constant wear soon creates a depression. On ordinary water-bound macadam, the dust nuisance has to be met, working as it does, discomfort to the users of the road, and injury and loss to property adjoining the road.

Quality of Stone.

The first remedy that suggests itself is the securing of a harder material than limestone. Trap rock stands first among the stones suitable for road construction. This is an exceedingly hard and tough rock and is found in various parts of northern Ontario. It is quarried on Poole Island in Georgian Bay, and is used largely in Cleveland. The cost is much greater than of limestone, owing to the transportation charges, but as deposits occur in Eastern Ontario, there is an opportunity to secure it at reduced freight rates. Granite is quarried in Northern

Ontario, and is strong and less dusty than limestone. A wearing surface of three or four inches of granite or trap rock, over a limestone foundation, if properly laid and maintained, would make a much more durable road for heavy traffic, than can be secured from limestone alone. The harder stone is the more expensive to quarry and crush, but wears very much better on the road.

Tarred Roads.

The tarring of roads is largely practised in Great Britain. In 1908 there were about 2,000 miles of tarred roads in England, but last year this had been increased to about 10,000 miles. The oiling of roads with light oils, while somewhat reducing wear, is principally a dust palliative, but English practice in the use of tars seeks to combine with the reduction of dust, a material to bond, strengthen and preserve the road.

The tar in England is coal gas tar and is of a more uniform quality than that produced in this country. Tar varies greatly according to the coal used, and the process of gas manufacture in which the tar is obtained. This lack of uniformity has, in part, been responsible for many of the inferior tar macadam roads in Ontario, and for the feeling among engineers that its use is a matter of too much uncertainty. In general the tar should be refined by heating to drive off volatile oils, and other ingredients are added, principally creosote oil and pitch.

Tar painting and spraying is similar in its results to the use of oil, and resembles strongly the use of asphaltic oil. Its effect is temporary, it is a surface treatment, lasting only for one season, and when broken up, the road is left in a dirty condition. The road is first cleaned of all dust and caked mud, and a thin coat of tar is then spread in various ways by hand and by machine. A light coating of screenings is sprinkled over the surface.

After refining, tar for spraying may have linseed oil added to it to cause it to flow more smoothly.

The tar grouting process is similar to the penetration method of the United States. Refined tar is heated, fluxed with oil, and is then poured into the interstices of a surface coat of broken stone. When the tarring is finished, the surface is sprinkled with a coat of stone screenings or clean gravel, and is thoroughly rolled; then is completed with a paint course topped with screenings and rolled. The cost of a grouted surface of tarred stone in English work is about 42 cents a square yard. The tarred stone is usually about three or four inches in thickness, which is rolled smooth before the tar is applied.

Tar macadam roads are built by coating the stone thoroughly with tar before laying on the road. A foundation of coarse stone is first laid; or an old macadam road is used as a foundation, first cleaning away all dust and mud. The tarred stone is then spread in layers, which are rolled separately, and the whole is coated with dry screenings before final consolidation with a roller.

In tar macadam the stone and tar are hand-mixed, both stone and tar being heated. The mixture used for this purpose usually contains tar, pitch and creosote oil. The proportions are about 50 pounds of pitch, 12 gallons of tar, 2 gallons of creosote oil, and one ton of broken stone. The pitch is broken into fragments and put in the tank, the tar is then poured in, and when these reach boiling point the cresote oil is added. Constant stirring is necessary until a uniform consistency is reached. The stone having been heated until quite dry, the tar and stone are mixed and turned over several times and the mixture is then spread on the road. The material

is usually put on in three layers: The bottom layer 3 inches thick of 2½ inch material; the second layer 2 inches thick of 1½ inch material and the top layer 1 inch thick of ¾-inch material. The last course is dusted over with coarse clean

A Combined Concrete Kerb and Gutter in Ottawa.

sand, and is rolled until consolidated. The cost is usually about $1.00 a square yard, but this is found too expensive for country roads.

"Tar matrix" is a term applied to roads in which fine, tarred gravel or stone chips are used to fill the interstices of an ordinary macadam road, thus sealing and making the road surface impervious. There are three methods of construction. One way is to prepare and roll a good foundation of broken stone. On this is spread the tarred material to a depth of one or one and a half inches. Then a layer of broken stone about three inches in thickness is spread, and the road is rolled until the tarred gravel comes to the surface, making a smooth and well-bonded surface. Another way is to spread the tarred matrix over the broken stone and roll it into the interstices. A third method, the "Gladwell system," is a combination of the two.

Tar in road-making has not been favorably regarded in Ontario, as the results have been considered too uncertain. Tar macadam roads were at one time used in Hamilton, and in Ottawa, but their use has been largely discontinued. This is due in part to the decreasing price of asphalt, and to the unscientific way in which tar was employed in the pioneer work. A fuller knowledge of the characteristics of tar is leading to more satisfactory results, and that it has a useful place as a roadmaking material cannot be doubted. In English experience, tar macadam is considered too expensive for general application, but tar grouting is found satisfactory for country roads. The refining of tar to remove volatile oils, the addition of creosote oil and pitch, with an occasional tar painting to seal the surface as it becomes brittle, are among the more important factors in the successful use of tar.

English experience shows that, in general, tar painting costs 6 cents a square yard; tar grouting adds 42 cents a square yard to the cost of the road; and a tar macadam surface over an old roadbed costs 80 cents to $1 a square yard.

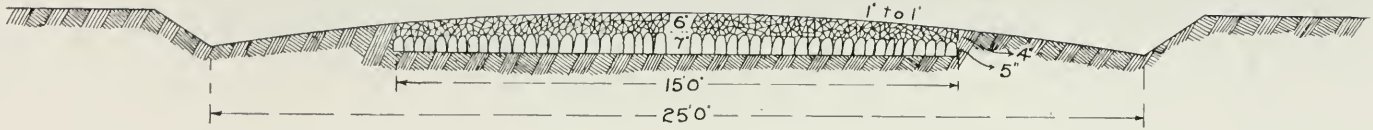
Asphaltic Binders.

In addition to the use of asphaltic oil as a dust-layer, this material, as well as refined asphalt, has been used to form a bituminous wearing surface in apparently every way that human ingenuity can devise. In general the methods employed in the use of tar are followed and may be classed in the same way as (1) spraying and painting; (2) asphalt grouting or the penetration method; (3) asphaltic macadam; (4) asphaltic matrix.

The latest development is the use of asphaltic oil by the grouting or penetration method. After a foundation or lower course of macadam has been laid and well consolidated, a surface layer of finer crushed broken stone is spread and partly rolled. Over this is flushed a grout of asphaltic oil containing 75 to 85 per cent. asphalt; or refined asphalt heated and fluxed is used. A light coat of screenings is spread, and the road is well rolled. This is followed by a surface painting or spraying of asphalt or asphaltic oil and a final sprinkling of stone screenings is added, after which solidification is completed with the roller. Asphalte, a mineral pitch, resembles tar, but is of more uniform quality, and the results in Ontario have been more certain.

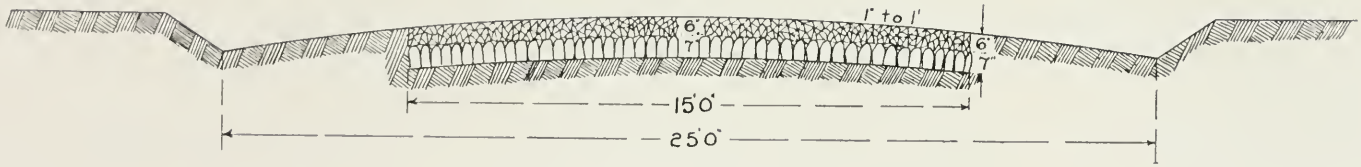
The mixing process is found expensive for country roads. The penetration method itself is only suitable for roads of heavy traffic in which the cost of repair would otherwise be large, because of constant motor or heavy traffic.

The cost of bituminous pavements has been approximately 20 cents per square yard for each inch in depth of the penetrated matrix. The stone was usually penetrated to a depth of two or three inches. This class of treatment has been used principally on state roads metalled to a width of 18 feet.



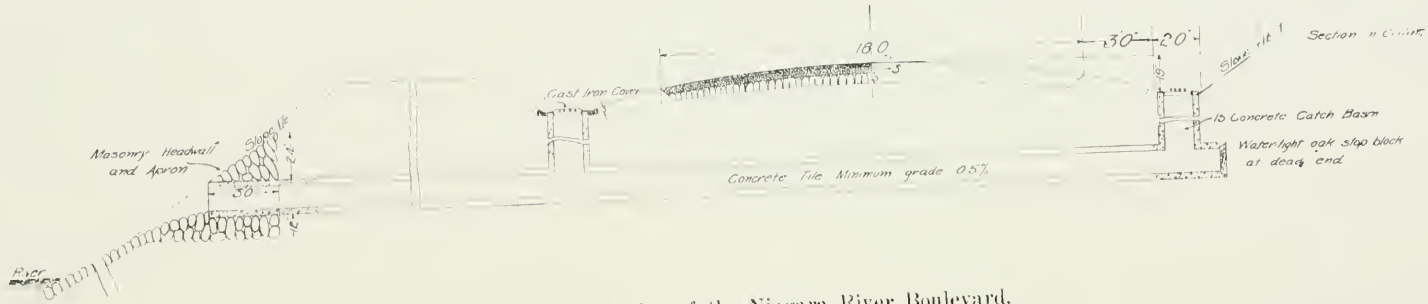
A Cross-Section of the Telford Road, England.

The chief characteristic of the Telford Road is the foundation of stone laid on edge. Larger stones were used at the centre and smaller at the sides, to provide a camber. Over this was spread a layer of fine broken stone. The foundation was about two-thirds of the thickness of the road.



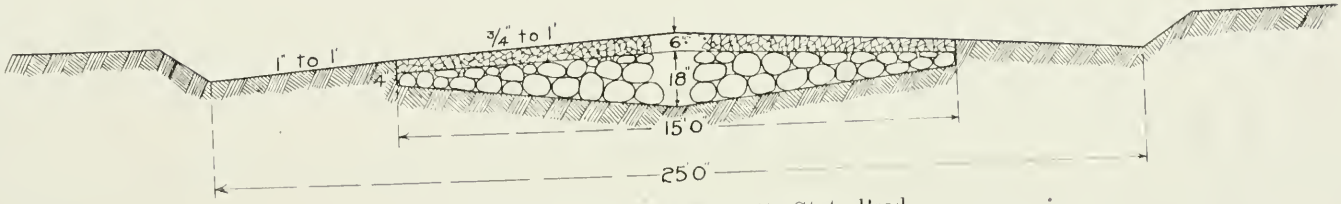
Cross-Section of the Tresaguet Road, France.

This shows the method advocated by the early road builders of France. Stones are laid on edge as with the Telford road, but they are of uniform height, and the earth sub-grade was given a camber.



Standard Cross-section of the Niagara River Boulevard.

A Telford foundation is provided, with 5 inches of broken stone surface. Local limestone is used. The concrete tile are placed at intervals, with catch-basins to carry surface drainage to the river.



Cross-section of a Massachusetts State Road.

This method of using a boulder or field stone foundation is characteristic of the State highways of Massachusetts.

Vitrified Brick.

Vitrified brick roadways have been laid in some parts of the United States on country roads, but under present conditions the cost would appear prohibitive in this Province, except for town or city streets. Brick pavements are laid only the necessary width to accommodate traffic, usually 10 to 18 feet wide, with broken stone or gravel at the sides, making a total width of 24 to 28 feet between gutters. A concrete foundation about four inches thick is first laid. On this there is spread a sand cushion two inches thick, which is compacted with a 500 pound hand roller. Over this are laid the vitrified brick, and the joints filled with a Portland cement grout. Concrete curbs hold the sides in place; below which are tile under-drains. Vitrified brick pavements in Ontario are costing about $2.50 a square yard.

Cement Concrete Roads.

Concrete is not a new material, having been employed centuries ago by ancient civilizations, and it is somewhat notable that their use of concrete was largely in association with highway construction. So durable have been some of the old Roman roads that they are still in use in Southern Europe, and are believed by the more ignorant peasantry to be of supernatural origin.

The modern use of concrete in highway work includes many details. It is largely used for pavement foundations, sidewalks, bridges and culverts, bridge abutments and retaining walls, bridge floors, curbs and gutters, man-holes, catch-basins, hand-rails, and other special features.

Concrete has become the recognized foundation for asphalt, brick and other high-class pavements for streets of towns and cities, and for the foundation of brick pavements for country roads. Its use as a paving material for the surface of the street or road has, however, been looked upon with considerable uncertainty, although in a number of cases, some degree of courage has been shown in carrying on this class of work.

Windsor has been the principal place in Ontario to adopt this type of paving, and reports as to its merits have, to the present, been favourable. Experimental blocks have been laid in Brantford, Chatham, Toronto and other cities.

Recently the good roads movement in the United States has led, in some degree to the adoption of concrete for country road construction for main highways radiating from large cities. The requirements of traffic have led to the adoption of a type of roadway consisting of a central concrete pavement from 10 to 18 feet wide. On each side of this are gravel or macadam shoulders, making a road of the desired width, usually from 24 to 30 feet from outside to outside of gutters. The cost has varied according to local conditions, but including shoulders, drainage and culverts, has been approximately $1.35 a square yard of concrete.

Concrete pavements are laid in much the same way as concrete sidewalks. The sub-grade is excavated and rolled. This should be carefully done, so that the monolithic pavement will have a base of uniform strength. If the sub-soil is of sand or gravel, the concrete may be laid directly on it, but if it is clay or other impervious soil, it should have a layer, three or four inches thick, of gravel, cinders, broken stone or other strong and porous material. The sub-grade should have the same camber or crown as the finished roadway is to have. If a town street, curbs are laid first; but if a country road, curbs are not used, the surface being merged into the gravel or macadam shoulders.

Over the sub-grade the concrete base is spread to a depth varying with the amount of traffic, usually four or six inches. The mixture should be proportioned

for greatest density, but common practice employs a 1:3:7 mixture of cement, sand and broken stone; or a 1:8 mixture of cement and gravel. The base should be immediately covered with a wearing surface 1½ or 2 inches thick of strong mortar or concrete.

At intervals of about twenty or twenty-five feet there should be expansion joints across the roadway, about ½-inch wide; and at the curb similar longitudinal joints, to be filled with pitch or asphalt.

To reach good results, the greatest care must be taken in particulars now well known in paving and general concrete construction. As with any form of road construction the drainage should be ample. The surface coat should be immediately spread on the base before the latter has commenced to harden, so that union will be complete. A well rolled and uniform foundation will prevent much cracking. The mixing of the concrete should be thorough, as imperfect mixing is the cause of a vast amount of poor concrete. The surface should be protected from the sun in the usual way with straw, sand, burlap, and should be kept moist until it is fully hardened. As a rule, a concrete road or pavement should not be opened for traffic in less than ten days or two weeks.

A perfect pavement, meeting all desirable conditions of cost, durability and service rendered has not yet been found; and as requirements in many cases are of an opposite character, it is not probable that an ideal pavement for universal use will ever be invented. The more important qualities usually sought in a pavement or road material are that it should be:

(1) Low in first cost.
(2) Easily and cheaply maintained.
(3) Smooth and hard, so as to offer least resistance to traction.
(4) Easily cleaned.
(5) Noiseless.
(6) Not dust-producing and not muddy.
(7) Non-absorbent and sanitary.
(8) Such as to give a good foothold for horses.
(9) Comfortable for those driving on it.
(10) Neither glaring nor hot.

The principal objections to concrete as a material for roads and pavements have been that the surface is too hard and glassy to give a proper foothold for horses; that it is rigid and therefore hard on the feet of horses; that it reflects heat and has an unpleasant glare; that expansion joints chip at the angles and under constant traffic deepen to holes; that cracks due to defective construction and to uneven foundations are difficult to repair, and, like expansion joints, chip at the corners.

On the other hand, it has been recognized that were these difficulties overcome, concrete has certain merits. It is low in first cost, as compared with other high-class pavements, and is one of the cheapest materials yet available for a permanent pavement or roadway.

Attention has recently been drawn to concrete pavements which have been treated with a surface painting of tar over which a thin layer of fine gravel is spread, just sufficient to be saturated and held by the tar.

In appearance these pavements resemble sheet asphalt, the tar and sand coating overcoming the glare and reflection of heat. The tar and sand fills the expansion joints and depressions, serving as a wearing surface. The expansion joints disappear from view and do not chip at the corners. The tar-sand coating deadens

In Wentworth County, on the Dundas and Waterloo Road, built in 1909.

the noise of traffic, makes the pavement impervious to moisture. If cracks appear these are painted with tar and sanded so that they, too, disappear, and they do not crumble under traffic. The treatment, in short, overcomes the more objectionable features of the concrete pavement.

Concrete pavements as heretofore laid in Ontario have cost about $1.15 a square yard. The tar treatment has cost about 2 cents a square yard, and the treatment has been found to last for two years, making the cost of tarring and sanding 1 cent per square yard per annum. If further experience proves the success of this treatment, it should be useful for the smaller towns and villages in paving their main business streets, and would be exceedingly effective for main highways radiating from large cities.

Dust Laying.

Dust prevention has long had a recognized place in urban communities of Ontario, the watering cart during dry summer weather being the remedy commonly applied, with moderate success. At best, however, there are intervals when temperature and breeze cause rapid evaporation, and the service is subjected to criticism proportionate to the dust that descends on pedestrians and adjacent lawns. When an adequate service is available, and the driver uses intelligent discretion as to the amount of water applied, the sprinkling wagon is an agreeable means of subduing dust; but very rarely is the right combination of service and care applied to the work, with the result that, as a means of subduing dust, water-sprinkling has not been effective.

A new factor, the motor vehicle, has of recent years entered the domain of traffic and has placed new demands upon the public highway. Ten years ago traffic on the roads of England had only 5 per cent. of motor vehicles, while last year 70 per cent. was motor traffic. The number of motor vehicles in Ontario is increasing rapidly, farmers are now among the users, and it is evident that the use of the public highways by this new mode of travel and transportation has tremendous possibilities. Already the motor traffic on some of the roads of the Province has brought the dust problem into association with country roads, with attendant discomfort to users of the road, and injury to crops, fruit, lawns and houses.

The scattering of dust by rapid and frequent motor traffic is a serious injury to the road itself, in that the dust is a necessary bonding material for the stone composing the road, and when this is removed, the road "unravels," roughens and deteriorates. Present motor traffic, in some cases, is now demanding dust-laying treatment; and future traffic will, in the writer's opinion, require it upon a considerable mileage of heavily travelled roads in the Province as a matter of preserving them from destruction.

Dust-laying treatment may be little more than a palliative in which the dust is prevented from rising, and remains as a cushion coat over the stone. Or treatment may go further, and may provide for a stronger and tougher road-surface that will resist wear by bonding and protecting the stone. As palliative treatments, may be considered sprinkling with water, the use of calcium chloride, oil emulsions, and petroleum oils with paraffin base. With protective treatments may be included the use of asphalt and asphaltic oils now being so largely tested in the United States; and the several tar treatments adopted as standard practice in England and Scotland.

Calcium chloride in solution is an improved method of water-sprinkling. A salt with an affinity for moisture, the principal effect of calcium chloride is to retain the moisture of the atmosphere, thus lessening the necessity of so frequent watering. The effect, however, is temporary, and its use is limited.

Oiling Roads.

The oiling of roads in California, Pennsylvania and other petroleum regions has been a matter of rumor and experiment for some years, but it was not until 1909 that a serious test was made in Ontario, when a residuum of petroleum with a paraffin base was used on the streets of Toronto. The odor of the oil was at first found very offensive, and the oiled mud injurious to painted vehicles, clothing and carpets. But the disagreeable odor passed away in a few days. A small quantity of oiled mud or dust was found no more injurious to clothing and carpets than was a large amount of dry dust. Continued experience in 1910 in Toronto and in other parts of the Province has confirmed the use of oil as a success, a measure of comfort and sanitation, in which the benefits outweigh the objectionable features.

To oil roads successfully requires a knowledge of the grade of oil used, its constituents and method of manufacture. A petroleum oil is generally employed, but some of these, such as the California oils, have an asphaltic base, while those of Ontario and Pennsylvania have a paraffin base. Asphalt is a binder; paraffin is not, and in an asphaltic oil will destroy the binding properties of the latter. While heavy asphaltic oil, free from paraffin, may be used within the body of the road, or sprinkled over the surface, paraffin oils can be used only by the latter method.

Paraffin oil, such as that first used in Toronto, may be sprinkled from an ordinary watering cart, and on country roads during the past season, crude home-made distributors attached to common water wagons were made from perforated gas-pipe, with success. The oil should be applied to the road in warm, dry weather. Two applications early in the season, followed by two or three later, according to the weather, have been found sufficient to keep down the dust; using for the season on a country road about 3,500 gallons. About 1,500 gallons per mile should make the first two applications. The cost varies according to local conditions, but has been about 4 cents a gallon, and 1 cent for applying.

Asphaltic oils may contain a varying percentage of asphalt up to about 80 per cent. Greatest care is needed in putting it on the road, to avoid splashing and inconvenience to traffic. Oils with a high percentage of asphalt have to be heated to apply to the road. Special sprinklers are desirable, with the distributors close to the road surface to avoid splashing. One-half of the road only should be oiled at a time to prevent inconvenience to users of the road. Immediately, or within a few hours after applying, the surface should be sprinkled lightly with clean, coarse sand or stone chips. Before applying, the road should be swept clean and sprinkled to slightly moisten the surface, but the weather should be dry. If rain approaches, it is desirable to get the oil covered and partly absorbed by screenings, otherwise the oil will be splashed out to the road-sides. One-quarter of a gallon of oil to the square yard in each of two applications will last one season and in some cases more. The cost of asphaltic oiling has been found about 8 cents a square yard for two seasons, less oil being required the second year.

Oil emulsions, in which alkali or acid chemicals are used to "cut" the oil, are more easily applied, but their effect is temporary.

High pressure sprinklers are used in some cases, such as are used for tar sprinkling in England. The penetration of the asphaltic oil into the roadbed is aided by this method. The use of high pressure sprinklers is favorably reported from the United States. Some highway engineers allow the oil to remain on the road for five or six hours to permit penetration of the oil, and evaporation of volatile matter, after which a light coating of stone screenings is swept or spread over the surface.

Special Materials.

The demand for a road material that will be dustless and durable has caused a large number of patented materials to be placed on the market. Roseate qualities are claimed for many, and while some are clever and promising compounds, the important test—the time test—is one which has yet to be satisfied by all, for experience is necessarily very limited. Glutrin is prepared from a waste of wood pulp manufacture, a dark brown liquid, which is diluted with water and sprinkled from an ordinary watering cart. Tarvia is a preparation, or blend of tars, designed to meet the needs of a standard and uniform grade of refined tar. It has been used on Beverley Street, Toronto, in several ways with a view to testing its value. Westrumite is said to be an emulsified asphalt or asphaltic oil. Rocmac is a liquid which, mixed with powdered limestone, produces on exposure to the atmosphere, silicate of lime. Several test sections have been laid in the Province, and its action in the road is of an interesting kind. Good results are reported from England and Scotland, but, with many other materials, its degree of permanence has yet to be determined.

In general, the situation at the present time has shown the value of petroleum oil with paraffin base for easy application as a dust palliative. Petroleum oil without paraffin and with an asphaltic base can be applied to make a more permanent dust preventive; and containing a large amount of asphalt may be used as a protective coat or as a grout. Some grades of refined asphalt applied by the penetration or grouting process have a high value in making at a reasonable cost strong bituminous roads for heavy country traffic, free from dust, and reducing the cost of maintenance. The use of tar is a promising field in Canada as in England, and affords an opportunity of being less dependent upon patented materials, and the larger asphalt and oil trusts.

The quality of stone used in the road has a marked influence upon durability, no matter what binder may be employed. Western Ontario has only limestone, while some parts of Eastern Ontario are better favored with granite and the more durable rocks. Field stone, where used, should be selected to remove inferior and decayed limestone and sandstone. For roads of heavy traffic much would be accomplished by securing for the wearing surface a three or four inch coat of trap or good granite, but at the present time few quarries have been opened and the cost ordinarily would appear to be beyond reach.

ROAD LAWS AND ADMINISTRATION.

The building of a system of roads adequate to the needs of an agricultural country, such as Ontario, is a large and expensive undertaking. The cost is made up not so much by the purchase of material, as by the labor of men and teams, involved in preparing and hauling material, grading and draining. This means that to build economically and well the organization for efficiently utilizing labor is the all-important factor. With proper organization and system, the physical principles will be automatically provided for and applied. Carefully framed legislation is therefore of the greatest importance.

Laws relating to the construction and maintenance of public roads are not the same in any two countries or states. Just as road-building varies according to climate, physical conditions, character of traffic, density and wealth of population, so the present laws and systems have been the outgrowth of many circumstances, customs and requirements peculiar to each nation and locality.

The road systems of the more progressive countries of Europe are not centuries old as is commonly supposed, but were principally constructed during the first half of the nineteenth century in accordance with the principles developed by Macadam, Telford and Tresaguet. Public attention was diverted by the introduction of steam railways, but the foremost countries of Europe are now maintaining their roads more zealously than ever.

A study of conditions and laws under which good systems of highways have been built, suggests certain basic features common to the more successful systems.

(1) *In no country has a general system of good roads been constructed by municipal effort alone.* The roads of France have been built by authority centralized in the national Government; in Germany they were built as military highways by the Imperial Government; in England they were created by turnpike trusts, have passed to county and district authorities for maintenance, but national influence is now being restored.

(2) *Good road systems have been the result of special effort for first construction.* In England, as previously stated, they were produced by the turnpike trusts; in France and Germany for military purposes and in a broad way. The same fact is instanced in Ontario, where practically the only good roads have been built by toll road companies, under present or past county systems, or under provincial authority.

(3) *Good road systems, after construction, receive careful and systematic maintenance,* usually under the department of Government by which they were constructed. The road systems of progressive European countries are now principally a matter of maintenance, and their existing organizations and expenditures are for that purpose.

(4) *Main and local roads are classified and distributed for construction and maintenance;* no one local or national authority effectively controls all roads. In England main roads are under county control, and the less important roads under district authority; in France roads are divided into three classes—national, provincial and communal—corresponding to national, or state, county and township. In Germany roads are divided between the state and the municipality. In the United States, where the more progressive legislation has been adopted, roads are being assumed by the state; state aid is extended to county systems and, at times, to townships.

The Ancaster Road in Wentworth County.

(5) *General systems of good roads receive the supervision of technically trained men and a body of experienced superintendents and workmen.* In France and Switzerland, road engineers are required to have diplomas from national colleges of highway engineering. In England and Germany public opinion demands that roads should be under the direction of engineers of recognized standing. The United States Federal Government is giving graduate engineers a post-graduate course in highway engineering, and several of the states have, in their state universities, chairs of highway engineering.

(6) *The cost of main roads, county and state roads is distributed over the whole people, rural and urban,* and is not left as a charge upon rural districts only. This is accomplished principally through the national or state contribution, or a general county tax. It is recognized that the improvement of town and city streets has a local value, making a frontage tax equitable; but that main country roads, in addition to their local value, have so important a place in national development that national or state expenditure and administration becomes advisable, as a means of fairly distributing the cost, and of securing economical, adequate and uniform roads.

(7) *A central intelligence bureau for collecting and distributing information* respecting roads and pavements, including the testing and investigation of road materials, is directly or indirectly, a function of state and national government, under effective systems of road administration.

Roads in older Ontario are constructed under two different systems or organizations: (1) By Townships: (2) by Counties aided by the Province.

Referring to the main features of good road systems in other countries previously outlined, it will be seen that where the township system alone is followed, nearly every basic principle is violated. (1) The attempt is made to build by municipal effort alone. (2) Special effort for first construction is not provided. (3) There is inferior provision for maintenance. (4) Technical and experienced management is avoided. (5) There is no classification of roads for special treatment. (6) The cost is placed entirely upon the rural municipality. (7) The influence of the central bureau is not directly effective.

The Act to Aid in the Improvement of Public Highways is a step in accordance with the more advanced systems of road administration. Under it county councils may assume a system of leading roads, the Province contributing one-third of the cost of construction.

It will be seen that this Act is a measure in keeping with certain of the principles that have created the better class of highway systems, as follows: (1) The work is not municipal alone, but receives the co-operation of centralized provincial organization and support. (2) A special effort for construction is created. (3) In provision for maintenance, the Act is lacking in that counties become responsible for maintenance, but after three years, under certain circumstances, the roads may revert to the townships. (4) The Act classifies the roads, and separates main roads from local roads for special treatment. This is not practicable where one corporation controls all the roads. (5) The tendency of the Act is to create a body of experienced superintendents and workmen through their permanent employment on the roads. (6) The cost is more equitably distributed, in that through the Provincial grant the urban municipalities contribute a part of the cost. As rural and urban population and assessment are nearly equal in the Province, it follows that one-half of the Provincial grant is contributed by towns and cities. (7) The central Provincial intelligence bureau has a direct influence on county road systems.

Ready for Road-building in Peel County. Widening the Foundation with Field Stone.

CANADIAN ROAD LAWS.

Road construction in Canada from the standpoints of climate, topography, material, and traffic shows great diversity. There is moist climate and dry climate, extremes of cold and heat; the mountains of British Columbia come into close contact with the level prairies of Alberta, Saskatchewan and Manitoba. Through Ontario and Quebec, to New Brunswick and Nova Scotia, the country varies from the mountainous and forest covered, to fields of rolling fertility. Through the prairies there is a split-log drag area, where road metal is nonexistent. In other districts the metal available varies from Laurentian granite to limestone, or glacial deposits of gravel. Traffic is, in cases, that of automobile travel between large cities; in others the strictly rural highway; in others the prairie or forest trail, or the mining road over mountains and muskegs.

Road-making in Canada, with minor exceptions, has been a municipal function until the last decade. In that period practically all Provincial Governments have adopted some measure of Provincial legislation equivalent to State road laws. In some cases it amounts merely to engineering advice and instruction; in others it is a substantial measure of Provincial aid. None of these laws are, as a rule, modelled after those of another, or of another country, but have grown as from local requirements and conditions.

Thus the laws of Quebec harmonize with old French customs, chief of which was that each farmer should be responsible for the road in front of his property. In Nova Scotia the feeling of the people has been trained to accept Provincial measures. In Ontario, ideals are more favorable to local government, so that the Provincial authorities have not moved as rapidly along the line of Provincial aid as would be possible in other provinces and states. The Federal Government of the Dominion does not give aid to road-building.

Ontario.

Population, 2,167,978.

Area old Ontario, 40,000 square miles; total area, 260,000 square miles.

The greater number of roads in the older part of Ontario are under the control of the township councils. These township roads are maintained solely by township expenditure raised by direct taxation. Township councils have full control of statute labor, and in addition they invariably make further expenditure, raised, as stated, by direct taxation. In numerous townships statute labor is commuted or wholly abolished, and road construction placed on an entirely cash basis.

It is believed that in the near future statute labor will be done away with by nearly all townships. Public feeling is strongly turning toward that end. Township councils in 1909 spent in cash, on purely township roads, over $1,400,000, and over 1,100,000 days of statute labor, equal at least to $2,500,000. In the next ten years, townships will spend twenty-five million dollars, and unless better methods are followed there will be little of permanent value resulting. Under more efficient methods of managing labor, such an outlay should produce substantial improvement. It remains merely to appeal to the public judgment to attain the object looked for—an entire cash system under a permanent road superintendent in each township.

The following communication from the Reeve of Sydney Township, in Hastings County, is explanatory of the better type of township management in the province:

"We appoint a superintendent by by-law, and pay him by the day at $2.00 per day for ordinary work; and $2.50 when he takes his horse and buggy out with him to inspect jobs that have been let to farmers, or to pay for the same, and also when he accompanies the councillors over their several divisions to make appropriations.

"The superintendent draws $300 from the Treasurer to start with and pays all accounts and labor. He makes out a pay sheet showing every day's work and who did it, and has the signature of every person receiving money. When the $300 is paid out, or nearly so, the Reeve (when convenient) looks over it and signs it. Then the Treasurer gives him the amount of his pay sheet, so that he (the superintendent) always has $300 to account for.

"The superintendent has the privilege of taking a team and driver, for which he gets $3.25 per day as lead team, and the superintendent works when it

On the Lincoln County Stone Road Near Grimsby.

is convenient to do so. Other teams regularly employed get $3.00 per day, but he also employs farmers when he can, for which he pays $2.50 for team and driver (as they are boarding at home), and for shovellers $1.75 per day.

"The superintendent's gang do all the grading and culvert building, and what metalling he cannot get jobbers to do. We find that the farmers like to draw gravel about the time they used to do their statute labor. We select a reliable man to take charge of the expenditure, say of 10, 20, 50 or 75 dollars, in hauling gravel, and pay for such work; for foreman, $1.75; other shovellers $1.50, and teams $2.50. With such men we make arrangements to keep snow roads open at 10 cents per hour.

"We have about 4,000 days' work which we commute at 50 cents per day and supply the rest of expenditure from rates levied for general township purposes. We spend between $4,000 and $5,000 annually. We build all concrete

culverts 20 inches, 36 inches, and 5 foot span, arched with a half circle. The 36 in. and 5 ft. forms are halved and fixed with angle iron so as to get out easier. We put in a plank form on the sides, set the arch form on it, and when culvert is set, knock the plank down and the arch form drops down. In warm weather, for the small culverts the form is left in over night; and in cold weather two or three days. Concrete is mixed 1 to 6 or 7. We can build 20 inch ones for $12 to $14, 36 in. ones at $25 to $30, and 5 ft. ones at $45 to $50, and have about 80 of them. We have all material very convenient. We make culverts 16 and 18 ft. in length, according to situation. We have a large old-fashioned grader but do not use it, but will buy up-to-date machinery as our circumstances demand it.

"The Superintendent is always under the supervision of the councillors in their several divisions, and any alterations or extras to appropriations the Superintendent consults the said councillor. Our Superintendent and his gang board among farmers.

"The system gives the public satisfaction and there is no agitation in favor of old statute labor system."

Highway Improvement Act.

While statute labour provides in a measure for maintenance, the only distinct work of construction in Ontario is in connection with county council management. The Act to Aid in the Improvement of Public Highways provides for the establishment of county systems of highways, these to be aided by the Provincial Government to the extent of one-third of the cost of construction. These roads are built in a permanent manner, the work being in charge of a superintendent or engineer appointed by the county. At the end of each year, the County Treasurer transmits to the Provincial Highways Department a statement of the county road expenditure, including bridges on county roads. One-third of this amount is then paid to the County, through the Provincial Treasurer. The work is carried on from year to year by the county, and annual payments are made by the Province until the county system is constructed in a durable manner.

Prince Edward Island.

Population, 103,258.

Area, 2,184 square miles.

The Province is not divided into municipalities, and all the roads are maintained directly by the Provincial Department of Public Works.

The Province is divided into thirty-eight Road Divisions, with an average of about 100 miles of road in each.

Each Division is supplied with a road machine and a man to run it and presided over by a Road Inspector, who has charge of all work in the Division. The soil is of a soft, loamy nature, this making about ninety per cent. of the roads by road machinery.

There is practically no macadamizing or permanent work.

The total amount expended on roads in this Province is about $30,000 per annum, equal to about $8.00 per mile.

Nova Scotia.

Population, 459,116.

Area, 21,428 square miles.

There are two accounts or funds from which the Provincial Government makes expenditure on bridges and highways, and there is also a tax assessed and collected by the several county municipalities.

Larger bridges (those costing more than $500 to construct), when built either of wood or permanent material, are chargeable to capital account, a fund which is part of the Provincial debt. This expenditure is made under the Provincial Engineer.

A certain sum from revenue (this year $235,000) is placed in the hands of the Road Commissioner, for repairs to larger bridges, construction and repair of smaller bridges and construction and repair of highways. Bridges are a first consideration and the remainder of the money (about 60 per cent.) is applied to the roadbed of the various highways throughout the Province.

The municipal authorities have no control over the expenditure of these monies, as the charges from revenue and the interest on capital expenditures are paid from the Provincial Treasury.

An amount of about $250,000 is assessed by the municipalities under the Statute Labor Law and the work is carried on under the control of these authorities.

Yearly reports, showing the amount collected or uncollected in each district, are submitted to the Road Commissioner and by him to the Government, but outside of the regulation of the Statute Labor Law, the Government exercises no jurisdiction with regard to statute labor, as this law was enacted after consultation with the wardens of the various counties.

During the present year an examination of the highways is to be made and the report submitted to the Government at the next session of the Legislature.

It is proposed to borrow money on capital account and to expend it under the same system as that of larger bridges, that is, under some authority appointed by the Government. This is to supplement the present expenditure from Revenue which, with 18,000 miles of road to keep up, is insufficient to do more than make the roads passable and to attend to the most urgent cases of reconstruction or the building of new roads.

In 1880 the municipalities had full control of the roads and bridges but neglected them and the Government enacted various laws, first, taking over the construction of larger bridges, and, secondly, the repair of same; then, thirdly, the construction and repair of smaller bridges, and, fourthly, the maintenance of public highways to a great extent.

Previous to the organization of the Road Commissioner's Department in 1908, this last named expenditure came under the control of the municipal councils, to be worked in with their statute labor, but all bridges and most of the culverts and sluices are now put in by the Government and about $165,000 of provincial money is annually expended on roadbed repairs.

New Brunswick.

Population, 331,120.

Area, 27,985 square miles.

Under the provisions of the present Highway Act, under date of 1908, the road work in this Province is governed by Highway Boards in the parishes in which they may be situated. The Province is divided into fifteen counties, subdivided into 144 parishes. A Highway Board consists of two county councillors, elected by the people, and a secretary-treasurer appointed by the Government.

In most cases the largest portion of the road tax is worked out in statute labor, the Government supplementing the road tax money with a provincial grant for each parish. Last year the Government grant was over $100,000.

Only in special cases does the Government expend road money directly. This is done by road commissioners appointed by the department.

Quebec.

Population, 1,620,974.

Total area, 351,873 square miles.

The roads of Quebec have until recently been maintained under a system, very similar to that of statute labor in Ontario, whereby every farmer is responsible for the construction and repair of the roads adjacent to his own property. The frontages in Quebec are very narrow, owing to the method of sub-dividing land, so that each farmer has only a very short section of road to keep up. The method has not resulted in good roads, and the Provincial Government has adopted a plan of making grants to townships in which this system is abolished, the grant to be one-third of the expenditure, but not to exceed $1,000 in any one year. This offer, it is said, is being taken advantage of but slowly. The Government has also bought ten outfits of roadmaking machinery for use in the first municipalities applying, these to be sent around in the order asked for. Some sections of Quebec are, however, seeking good roads through bond issues, one township, Huntingdon, having issued debentures for $80,000. The Government maintains a provincial office of road instruction. The construction of provincial roads is under consideration, one of these to connect Montreal with a New York State road leading up the Hudson from New York City.

Manitoba.

Population, 365,756.

Area, 73,732 square miles.

The Province is divided into one hundred rural municipalities, with population of each varying from 600 to 5,000. The municipal council consists of a reeve and four or six councillors, half of whom are elected for one year and the remainder for two years. The council has control of all road expenditure, organization and methods being almost identical with those of townships of Ontario.

Important bridges are under the supervision of the Provincial Department of Public Works, all plans being subject to their approval, a measure similar to recent Ontario legislation respecting county bridges. The Government maintains the office of Provincial Highway Commissioner, the duties of which are largely educational.

Saskatchewan.

Population, 300,000.

Area, 250,260 square miles.

With the increasing settlement of the Province, local improvement districts are being formed and whereas the roads were formerly built and maintained entirely by the central Government, municipal organization is steadily advancing and is adding its force to the betterment of roads.

Expenditure in 1909 was as follows:

Provincial funds for road purposes.....	$549,928 11
A direct road tax in unorganized territory.....	70,991 70
Direct tax by local councils	906,448 00

The Government maintains organized grading gangs to carry on provincial road work, and builds all steel bridges by a permanently organized bridge crew. A sum, last year $50,000, was granted as aid to local municipalities in the construction of main trunk roads, the government grant being in the proportion of one-third.

Alberta.

Population, 325,000.

Area, 253,540 square miles.

The Province is divided into Local Improvement Districts, consisting of from 3 to 6 townships (the average size of a district being 4 townships), and the settlers elect a representative for each township, thus forming a council.

In sparsely settled districts which do not possess the requisite population required by the Local Improvement Act, a large Local Improvement District is formed and the work handled direct from the Provincial headquarters, levying a flat rate tax of $2.00 per quarter section, which is payable in cash to the Government.

For Government work on highway improvement, a certain sum is voted at each session of the Legislature for this purpose, and is divided among the different constituencies in the Province, according to requirements. The expenditure of this money is carried out under the direct supervision of a provincial staff, and the system adopted is to have inspectors and general foremen in charge of districts under whom individual road crews, with a foreman in charge, carry out the work.

There are no municipalities at present, but it is expected that a Bill will be introduced with this end in view in the near future.

Road expenditure for the past three years has averaged about two hundred thousand dollars per annum, and the taxes levied by Local Improvement Districts, which is a constantly increasing item, was in the neighborhood of six hundred thousand dollars in 1910, but this expenditure is controlled by local councils.

British Columbia.

Population, 190,000.

Area, 372,630 square miles.

Road building in British Columbia has been almost entirely a provincial work, due largely to the mountainous and heavily timbered character of the country. Provincial expenditure under the Department of Public Works is large, and for the present year an outlay of $4,500.000 is authorized. The excellent roads of Vancouver Island were laid out in early colonial days by the Royal Engineers, and the Province is continuing a similar type of construction. The roads generally have a 66-foot allowance, with a standard graded width of 24 feet exclusive of ditches. The stone obtainable is of the best for macadam road construction.

The provincial road-making equipment represents an outlay of $100,000, and the programme for the period of 1910-13 contemplates an expenditure of about $20,000,000 on trunk roads.

GREAT BRITAIN AND IRELAND.

	Area square miles.	Population.	Road expenditure in 1905–6.	Total road mileage.
			$	
England and Wales	58,309	35,748,780	65,667,662	149,759
Scotland	30,000	4,472,103	5,938,967	24,642
Ireland	32,583	4,456,546	5,717,262	54,064

The first road law of England was passed in 1285, and the statute labor system was created in 1555 by an Act providing for the maintenance of roads by each parish with compulsory labor. Toll roads had their origin in 1346, when tolls were levied on certain of the roads radiating from London, but it was not until after an Act of 1663 that they gained public favor. In 1840 there were 104,772 miles of toll roads under turnpike trustees, but these were abolished in England and Scotland by an Act of 1878. Until 1888 a contribution from the Imperial Exchequer of half the cost was made to county councils for the maintenance of main roads, and in that year the fixed contribution was abolished, but certain revenues were, in lieu thereof, assigned to the general county funds, the main roads remaining, however, under county control. In 1909 an Act was passed levying a special tax on motors for road purposes, this fund to be administered by a national road board, which becomes in effect a central advisory bureau.

Administration. The road systems of Great Britain differ somewhat in England, Scotland and Ireland, but are principally under municipal control. While administration is local it is characteristic that the municipal authorities employ competent engineers to take charge of the work, while public ideals of road conditions are such that scientific construction and repair is secured.

It is said in favor of municipal administration that the municipal engineers, permanently in office, are able to observe local conditions closely, and, from long acquaintance, get better results than could be had from a more general system of administration such as that of France.

The administration, however, is in a stage of transition. Growing out of the tremendous increase of motor traffic during the past ten years, whereby the cost of maintenance has in cases been doubled, a special tax on motor vehicles has been levied by the Imperial Government, and for the administration of this fund a Road Board has been created under the Road Development Act, 1909. The Board consists of a paid chairman and four additional members assisted by a chief engineer and engineering staff. The Board has power, (1) To improve existing roads, and (2) To construct new roads. Not more than one-third of their estimated income for the year is to be applied to new roads.

It is the announced policy of the Board that it will act in an advisory and aiding capacity to local highway authorities; that expenditure immediately available will be devoted to grants to highway authorities for improving corners, curves, and crossroads dangerous to motor driving, and widening of narrow roads without footpaths. Consideration will then be given to proposals for strengthening weak foundations, tarring, and methods of dust prevention.

To this end invitations have been issued for proposed improvements; and while about $5,000,000 will be immediately available, applications have been received for works the cost of which would exceed $27,000,000.

Road Classification. In England and Wales roads are classified as:

(1) Main roads, built and maintained by county authorities. 43,266 miles.

(2) District roads, maintained by funds raised by the district council, 106,493 miles.

Ornamental Electric Light Posts.

The view is one of Gore Park, Hamilton, a breathing spot in the heart of the business section of the city, showing the most recent type of street lighting.

In Scotland there are no District Councils as in England, so that County Councils maintain all rural roads.

In Ireland responsibility is divided between county and district councils.

FRANCE.

Area, 204,092 square miles.
Population (1901), 38,641,333.

Road Mileage:	Miles.
National Roads	23,800
Other roads	316,200
Total	340,000
Total expenditure in 1905-6	$5,958,835

The present road system of France was founded by Napoleon, who centralized all road control in the National Department of Ponts et Chaussées, and built such roads as that through the Simplon Pass, which was commenced in 1800 and finished in 1806. A French engineer, Tresaguet, was the earliest of modern road-builders, publishing a treatise on broken stone road building in 1775. Road work in France is now principally a matter of maintenance.

Administration. The road system is largely centralized in the Department of Bridges and Roads (Ponts et Chaussées) attached to the Ministry of Public Works, which includes a large staff of engineers having supervision of all classes of roads. About 600 are at headquarters, and the remainder, about 6,000, are scattered over the country.

The organization in general consists of:

1. The Inspector General of Bridges and Roads.
2. Chief Engineers in charge of departments.
3. Assistant Engineers in charge of sub-divisions of departments.
4. Principal and ordinary superintendents.
5. Foremen of construction gangs.
6. Patrolmen.

Road Classification. Roads are classified as:

(1) Routes Nationales, or national roads, built and maintained by the State.

(2) Routes Départmentales. These are equivalent to county roads, and are paid for by the county, except in case of construction, when a part of the cost is defrayed out of national funds.

(3) Routes Vicinales. These are communal roads, equivalent to township roads. They are sub-divided into

(*a*) Chemins de Grande Communication.
(*b*) Chemins d'Intérêt Commun.
(*c*) Chemins de petite Communication.

Routes vicinales (*a*) and (*b*) are paid for by departmental and communal (county and township) taxation: while (*c*) Chemins de petite communication are paid for entirely by local taxation.

Educational. The Department of Ponts et Chaussées is a centre of information respecting roads, and investigates carefully all new materials and methods of construction.

A college of roads and bridges (L'École Nationale des Ponts et Chaussées) is maintained by the National Government and from it the large corps of highway engineers is drawn. Students, who are nominated by the President of the Republic, receive a training extending over three years, in all details of road engineering. During the summer they assist on works in progress.

Repair. The maintenance of roads is under a patrol or section system. The foremen in charge of each section are known as "cantonniers," of which there are about 10,000. These men are carefully selected for their experience, physique, and good character, and are a high class of laborers. Repairing is continuous.

GERMAN EMPIRE.

Germany owes her splendid roads largely to the period just prior to the introduction of railways, when they were built for commercial and military purposes. On the organization of the Empire in 1870, the State assumed control of the principal railways, and roads were delegated to the care of the provinces. No contribution is made by the Imperial Government.

Local organization varies greatly in the different States, and has been largely influenced by old customs, powers of hereditary princes, etc. There are usually two divisions: Statts-Strassen or state roads, and Lands-Strassen or local roads, and the standard of maintenance is, in some, very high. Two of the better known states are Prussia and Saxony.

Prussia.

Area, 134,603 square miles.

Population (1900), 34,463,377.

Administration. In the Kingdom of Prussia, the Ministry of Public Works exercises a general supervision over all roads and road authorities, and contributes $4,522,000 annually for maintenance, but the actual administration devolves upon the provincial (or municipal) corporations. All road engineers are appointed by the provincial corporations.

Educational. Highways engineers receive their training at the State Technical High Schools, and the supervision by the State provides a central information bureau relating to methods of construction.

Saxony.

Area, 5,787 square miles.

Population, 4,199,758.

Administration. The Kingdom of Saxony is divided into four departments over each of which is a chief ministerial officer. Subordinate to these are twenty-seven executive officers over as many sub-districts.

A United States Consular Report says:

"The skill, energy, and thorough education, as well as qualification and executive ability of these 27 men is the cause of the splendid government and fine condition of the road system of Saxony. It is without doubt the finest system of roads in the world and is the result of patient toil, extensive experiment, and disciplined attention."

Classification. Roads are classified as:

(1) State roads, built and maintained by the State under a State road director and staff.

(2) Common or connecting roads, built and maintained by the parishes. Officers in charge of State road districts are empowered to supervise and issue certain instructions relating to common roads, and to inflict penalties for neglect.

ITALY.

Area, 110,623 square miles.

Population, 32,045,404.

Total annual expenditure, 1905-6, $8,232,181.

Administration. The construction, maintenance, and policing of roads in Italy is under the supervision of the Department of Bridges and Roads attached to the Ministry of Public Works at Rome, and of the Corps of Royal Engineers. Construction is generally let by contract, but maintenance is under a special patrol corps of "cantonniers" as in France.

Classification. For distribution of cost, roads are classified as:

(1) National, built and maintained at the cost of the Government.

(2) Provincial roads (similar to counties), built at the cost of each of the 69 provinces.

(3) Communal (or parish) roads, built at the cost of the commune.

(4) Vicinal roads, a secondary class of communal road.

When a national or provincial road passes through a town or city, the cost falls upon the commune, and the Government or Province pays to the commune an amount equal to the cost of maintaining a similar stretch of road near the city or town.

BELGIUM.

Area, 11,373 square miles.

Population, 6,744,532.

Administration. The Belgian road system is largely centralized in the "Corps des Ponts et Chaussées," a department of roads and bridges in the Ministry of Public Works.

Classification. The system of public roads comprises:

(1) State roads, comprising 79 per cent. of the road mileage of Belgium, maintained at the cost of the Ministry of Public Works.

(2) Provincial roads under provincial authority.

(3) Vicinal roads under communal or local authority.

A fourth class, conceded roads, are built by private individuals who are authorized to collect toll for 99 years; at the expiration of which time the road becomes the property of the Government.

Each province (equivalent to a county), of which there are nine, has a well-organized State Government, and in every case there is a bureau of roads and bridges.

SWITZERLAND.

Area, 15,976 square miles.

Population, 3,315,443.

Total annual expenditure, 1905-6, $2,112,598.

Administration. The Federal Government, at Berne, has a general right of supervision over all roads, but each of the twenty-two cantons has actual charge of the roads within its respective jurisdiction. The Federal Government makes occasional grants toward the construction of new roads, and roads of an international character. In case of neglect of roads in any canton, the Federal Government withholds these and other grants until their directions are complied with, and complaints remedied.

Classification. The several cantons classify their roads according to local requirements. An engineer with capable assistants has charge of the work in each canton. In the Canton of Zurich, a typical case, roads are divided as follows:

(1) First-class roads, under the control of the Cantonal Council.

(2) Second-class roads, under the control of the District Council.

(3) Third-class roads, under the control of the Township Council.

Reinforced Concrete Handrail of Beam Design, in Wellington, near Elora.

HOLLAND.

Area, 12,648 square miles.

Population, 5,104,137.

Administration. Roads in Holland are under a special department under the general government. A network of roads is maintained by the government, so that unhindered communication between different parts of the country is preserved.

Classification. Roads are classified as:

(1) State roads, controlled by the central Government.

(2) Provincial roads, maintained by provincial taxation; but for new construction usually aided by the State to the extent of one-third of the cost.

SPAIN.

Area, 197,670 square miles.

Population, 18,089,500.

National roads (1905), 23,772 miles; other roads, no data.

Administration. The Spanish system of road administration is modelled after that of France. A law of 1842 brought into existence a national corps of road-builders (peones camineros) who are organized, uniformed, and employed in building and repairing roads, and form a distinct branch of the public service.

A Road Department forms part of the Ministry of Public Works. With supervision by the national authorities for all roads, they are classified as follows:

Classification. (1) National roads, built and maintained by the Spanish Government. These are roads which connect Madrid with capitals of Provinces; or which connect provincial capitals; or which connect these main roads; and roads which, connecting cities or railroads can be regarded as of national benefit. National roads are also divided into three classes according to importance, and are built of proportionate strength and width. Some highways are built at the joint expense of State and Province.

(2) Provincial roads, of provincial importance only, built and maintained by provinces.

(3) Municipal roads, of local value only, which are a municipal charge for construction and maintenance.

AUSTRIA.

Area, 115,903 square miles.

Population, 26,150,597.

Length of State roads, 10,043 miles.

Total length of roads, 71,960 miles.

Administration. The Imperial Government employs a large staff under the Ministry of Public Works, for the supervision of state roads; while each of the fourteen provinces maintains a technical department in charge of provincial roads.

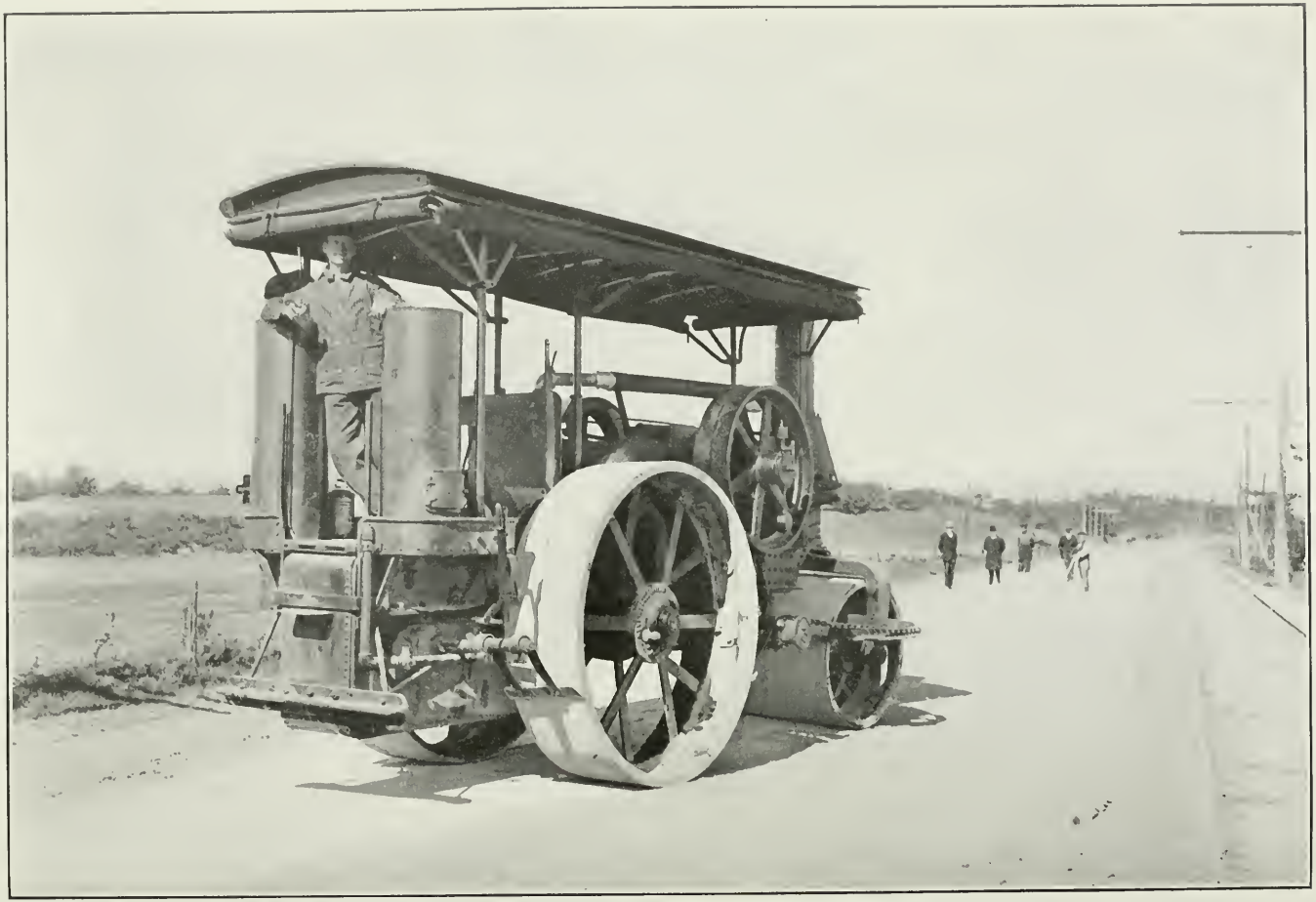
Classification. Public highways in Austria, while varying somewhat in the different provinces, are, in general, classified as follows:

(1) State roads, built and maintained by the Imperial Government.

(2) Provincial roads, built and maintained at the expense of the Province.

(3) District roads, built and maintained at the expense of each district committee; but to poorer districts where the roads cannot be properly maintained, a provincial grant is made from a fund set aside for that purpose.

(4) Municipal roads, under the management and control of municipal authorities, special provincial grants being made when large outlays are required.



A Gasoline Road Roller. Working on the Kingston Road for the York Highway Board.

NORWAY.

Area, 125,593 square miles.

Population, 2,239,880.

Administration. For construction or reconstruction, control of the main roads is vested in the Director of Roads, who is in charge of the national office of roads attached to the Department of the Interior at Christiania. Maintenance is in charge of the district authorities, and a species of statute labor exists for this purpose. Road engineers are trained at schools supported by the state and are employed by the state.

Classification. Roads are classified as:

(1) High roads, built under the direction of the national road authorities and paid for in the proportion of three-quarters by the Government and one-quarter by the district served.

(2) District roads built and maintained by the districts in which they lie.

SWEDEN.

Area, 173,968 square miles.

Population, 5,136,441.

Classification. Roads are classified as:

(1) High roads, constructed and maintained by the national government at the general public expense.

(2) District roads, which serve to keep up communication between districts, maintained by the inhabitants of each district.

(3) Parish roads, which serve the requirements of a parish, or which lead from one parish to another, built and repaired as a parish charge.

DENMARK.

Area, 14,848 square miles.

Population (1901), 2,464,770.

Administration. Roads in Denmark are built and maintained by the local municipal boards, but are subject to state supervision and inspection. Should necessity arise, the district boards are notified by the national highway department of any existing defects, and in default the state department may order roads constructed or repaired at the expense of the defaulting board. Continuations of roads which are main entrances of towns are under the joint control of county and town.

Classification. Roads are classified according to jurisdiction as:

(1) County roads, maintained by and at the expense of the county.

(2) Parish roads, maintained by and at the expense of parish or town councils.

Roads are further classified for more suitable construction as regards width, metal, etc., as:

(1) First-class, roads having a daily passage of at least 100 vehicles, including a large traffic of heavily loaded wagons. These are usually main roads surrounding towns for a radius of about five miles. They have a heavy sub-structure and a wearing surface of 10 inches of broken stone; width of carriage-way, 16 to 20 feet.

(2) Second-class, roads frequented daily by 50 to 100 vehicles, with some but no considerable heavy goods transport. These are usually subsidiary to, or extensions of, the roads of the first class. They have a good sub-structure and 8 inches of wearing surface; width of carriage-way, 14 feet.

(3) Third-class, traffic of from 20 to 50 vehicles daily, without heavy wagon transport. They have a metal coat about 8 inches thick, on a sub-structure of unscreened gravel; width of carriage-way, 12 feet.

(4) Fourth-class, traffic less than 20 vehicles daily. They have a surfacing of 3 or 4 inches of gravel: width of carriage-way, 10 feet.

RUSSIA.

Roads of Russia are inferior in character. The only roads deserving the name are under the control of the Ministry of Public Works. Roads are classified as:

(1) Chaussées, or broken stone roads, built by the National Government.

(2) Provincial roads.

THE UNITED STATES OF AMERICA.

The Federal Government of the United States maintains an Office of Public Roads, a branch of the Department of Agriculture, at Washington; but, except for educational or experimental purposes, does not build or contribute to general road building. Roads throughout the United States are, primarily, a charge upon local municipalities, but since 1891, when New Jersey adopted a system of state aid, thirty-three States have enacted laws providing for varying degrees of State assistance and control. The most thorough is that of New York State, in which complete road authority is centralized in the State Highway Department at Albany; and from this standard, State assistance recedes to merely educational and engineering aid as in Wisconsin, or the use of State prison labor, as in Georgia.

Office of Public Roads.

The United States Office of Public Roads at Washington was created in 1893 for educational purposes, with an appropriation of $10,000, but from that time the scope has been greatly extended, and in 1910 the appropriation available was $116,000. The administration is centered in one Director, and to the administrative section are four subordinate divisions:

(*A*) The Highway Division.
(*B*) Division of Tests.
(*C*) Division of Road Management.
(*D*) Division of Bridge Construction (in process of organization).

(*A*) *The Highway Division* employs twenty-four engineers and superintendents of construction, whose principal duties are:

(1) To give advice and instruction regarding the building and maintaining of roads, their services being without cost to counties and local municipalities.

(2) To give advice in cases of special difficulty.

(3) To build model roads.

(4) To build experimental roads.

(5) To investigate local conditions in any municipality applying, and prepare a general plan of construction and management covering a period of years.

(*B*) *The Division of Tests,* is equipped with laboratories for chemical and physical tests of all roadmaking and paving materials, such as rocks, gravels, clays, asphalts, tars, cements, oil and dust-laying materials, etc., etc. The physical laboratory for testing the hardness, toughness, wearing and cementing qualities of stone, and the strength of materials is said to be the most perfectly equipped of its kind in the world.

(*C*) *Road Management.* The Division of Road Management conducts all investigations as to road administration, revenues, expenditure, statistics, economic value of road improvement, etc.

Educational. Publications of the Office of Public Roads are issued from time to time, covering all branches of investigation; but in addition, a one year's post-graduate course in highway engineering is open to a limited number of graduates in civil engineering. During winter months they receive lectures from the experts of the staff, and in summer are employed on construction.

State Laws. Recent laws in which State governments have resumed certain powers respecting public roads are in no case duplicates of one another, but have been framed to meet constitutional restrictions, relative conditions of area, population and wealth, municipal and other local circumstances. In some cases counties are an important municipal unit, while in others they do not exist. The perfection of a system of state roads is looked upon as an ideal condition, while state aid is given to or through counties wherever they are sufficiently organized.

Prison Labor. Prison labor is used on the roads in the States of Utah, Washington, Virginia, South Carolina, Oklahoma, New Mexico, Kansas, Georgia, and California. In Illinois, prisoners quarry and crush stone for road purposes.

New York.

Area, 49,220 square miles.
Population, 7,268,894.
State roads (tentative), 2,800 miles.
County systems aided, 7,000 miles.
Township roads aided, 70,000 miles.
Total appropriation, $50,000,000.

Administration. The present state highway law of New York has been gradually evolved since 1898, in which year a system of aid to townships was established which did not prove satisfactory. In 1909 the present system was finally adopted, providing for the expenditure of $50,000,000 by a state highway commission. The state highway commission has control of all highways in the state. The system of repair by patrolmen is similar to that of France.

The organization consists of:

(1) A state commission of three members—the State Superintendent of Highways, the Superintendent of Public Works, and the State Engineer.

(2) Two deputy commissioners, one in charge of the construction and maintenance of state and country roads; the other having supervision of township roads.

(3) Six division engineers in charge of state and county roads, with necessary assistants and staff.

(4) A force of patrolmen, each in charge of the repair of about five miles of road.

(5) County engineers, appointed by the county council, having supervision of county roads, and taking charge of a portion of the state work if so requested by the state highway commission.

Classification. Roads are classified as:

(1) State roads built at the entire cost of the state.

(2) County roads, to which the state contributes one-half, the county 35 per cent., and the township 15 per cent. For maintenance the state collects from the townships $50 per mile, the remainder being contributed by the state.

(3) Township roads, to which the state contributes one-third of the cost of construction.

Massachusetts.

Area, 8,315 square miles.

Population, 2,805,346.

Administration. A state highway commission was created in 1892 to report upon a suitable system of highway administration for the state, and in 1893 this was made a permanent body, consisting of two members and a secretary. The executive officer of the commission is the chief engineer, who has a field and office staff.

The commission is empowered to construct state roads and to grant aid to the improvement of municipal roads. State roads are confined to the more heavily travelled highways, and are assumed by the state upon petition from the local councils. They are subject to the approval of the state commission, and must be part of a connecting system of highways which the highway commission has mapped out.

A State Road in Massachusetts.

The cost of state roads is, in the first instance, met entirely by the state, but 25 per cent. is afterwards collected from the municipalities through which the roads pass. The amount of aid which the commission may grant to any municipality is not to exceed 40 per cent. of the average annual municipal expenditure for the previous five years.

Hon. Harold Parker, Chairman of the Massachusetts State Highway Commission, in an address before the Ontario Good Roads Association in 1910, said in part:

"The organization of the working force of the Massachusetts Highway Commission is as follows: Under the commission, the officer in charge of the construction and maintenance of roads is the chief engineer, and all of the office force and field force come under his jurisdiction.

"The secretary of the board is the head of the clerical department, which is very extensive.

"The supervision of the automobile and of the telephone and telegraph systems has been placed under the control of the Highway Commission.

"Under this organization the method of procedure is as follows: Having determined as to the main lines of travel which, in the opinion of the commission, should be included in the state system, it becomes its duty each year to determine in what localities new sections of road shall be built, and to make the necessary allotments for each locality.

"Very careful surveys are made by the engineers of the commission of the roads which it intends to build during the year. Notes of these surveys are sent by the surveying force into the office, where plans, profiles and cross-sections are prepared. These plans are examined by the chief engineer, and tentative profiles and cross-sections are placed upon them, and they are sent to the engineer in charge of the division in which the road is located.

"The engineer makes a report showing the character of the soil throughout the length of the road, by making test pits or other observations, and detailing what, in his judgment, the method of construction should be; that is to say, whether the soil, where the road is to be built, is such as to require a foundation or not; what the character of the artificial foundation should be, if any; as to whether the road should be of gravel or broken stone; if of broken stone, whether of trap or of local stone; if of gravel, where along the road the gravel can be obtained; and also the cost of labor and materials in the locality, so that, upon the receipt of his report, the office can make up a final plan and profile with the exact quantities of each kind of material and an estimate of the cost, which is wholly to be relied upon.

"After the plans so reported have been revised and have been approved by the chief engineer, they are presented to the board for approval, after which they are filed with the proper authorities.

"Bids are opened at a fixed time, and the contract is generally awarded to the lowest bidder, although not to the lowest bidder if he is an incompetent or improper person."

The commission conducts experiments in construction; carries on investigations of various kinds; publishes reports and statistics, and its work is necessarily educational for the public and minor municipalities.

California.

State highways have been for some years under construction in the mountainous districts under the State Engineer. In 1909 a State bond issue was provided for, to be expended in the construction of state roads generally. Several counties have made large bond issues for roads. Convict labor is used on the roads under a state law of 1909.

Colorado.

State highways have been constructed through the mountains for some years under the supervision of the State Engineer. In 1909 a state commission of three members and secretary was appointed for the purpose of constructing state roads more generally, and for aiding county roads. The secretary of the commission is required to be a civil engineer, and is the chief executive officer. State roads are built at the cost of the state, and county roads are aided by a proportional grant.

Connecticut.

A State aid law was passed in 1895. This is administered by one commissioner. State roads are constructed under the direction of the commissioner. 75

per cent. of the cost being borne by the State and 25 per cent. being a charge upon the township through which the road passes. Township municipalities are aided in the same proportion, or in some cases the state pays seven-eighths of the cost, and the township one-eighth in the poorer districts. Township councils to secure aid make application to the State Highway Department, and grants are made subject to the approval of the State Highway Commissioner.

Delaware.

Under an Act of 1903, each of the three counties in this State is granted $10,000 annually; the county to contribute an equal amount. The expenditure is made under the direction of a State Highway Commission.

Georgia.

Under an Act of 1908, each county in the state is granted a quota of convicts. In 1910 the number of convicts available for distribution was 4,700.

Idaho.

Under an Act of 1907 a Highway Commission of three members was appointed, consisting of the Governor of the State, the State Geologist, and the State Engineer. State roads are built under separate Acts, providing an appropriation for each.

Illinois.

Under an Act of 1905, a State Highway Engineer was appointed, whose duties are educational and advisory to the municipalities in all matters relating to roads and bridges. Broken stone, crushed at two prison quarries, is supplied to municipalities for sample roads at cost of railway transportation, and the State also supplies steam rollers for this work.

Iowa.

The State College of Agriculture and Mechanic Arts is directed to give advice to municipalities regarding road construction.

Kansas.

A State Highway Engineer, whose duties are advisory to municipalities, and educational, was appointed in 1910. A road law of this date provides that, where 60 per cent. of the property owners owning 50 per cent. of land fronting on a highway petition for its improvement, the municipality is required to let the contract, and is empowered to levy a tax of not more than one mill on the dollar for a period of not less than five years.

Louisiana.

Under an Act of 1909 a State Highway Engineer was appointed who furnishes plans and specifications for all details of highway work to municipalities. Convict labor is employed on the roads as a measure of state aid.

Maine.

Under an Act of 1901, one State Highway Commissioner was appointed to administer the provisions of a law granting state aid to townships. The scale of

aid varies according to the wealth of the municipality. In the poorer townships the state aid may be as much as $2.00 to $1.00 appropriated by the municipality, and in the wealthier townships the state may grant only 75 cents to one dollar appropriated by the townships. Under an Act of 1910 state roads are provided for, and an appropriation of $125,000 was made for that year.

Maryland.

The first State Act was passed in 1898, but has since been largely revised and its scope extended. There is now a State Highway Commission of three members. An annual grant of $200,000 is made for aid to counties, the State paying one-half of the expenditure. In 1910 an appropriation of $5,000,000 was made for the construction of state roads, the entire cost to be borne by the State.

Michigan.

The first State Law was passed in 1905, and its scope has since been extended. The administration now consists of one State Commissioner and a deputy, with necessary field and office staff. Aid is made to counties and townships on a fixed basis, as follows:

Gravel roads with 5 inch thickness of surface metal, $250 per mile.

Gravel roads with 8 inch thickness of surface metal, $500 per mile.

Gravel base with stone surface, 7 inches in all, $750 per mile.

A road entirely of crushed stone, 7 inches in thickness, $1,000 per mile.

The width between open ditches is required to be 18 feet, metal 9 feet wide, and the road is to be properly drained and crowned. The State appropriation for 1910 was $140,000.

Minnesota.

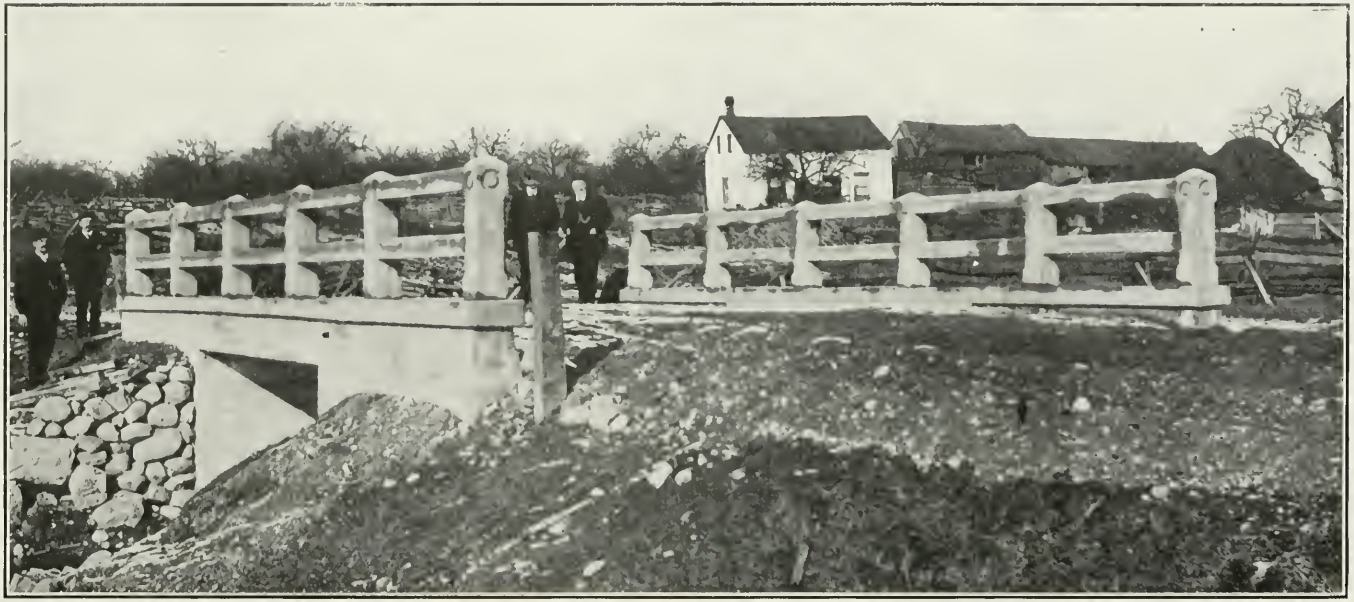
Under an Act of 1905 a State Highway Commission of three members and a secretary was provided for, the secretary to be a civil engineer and the chief executive officer. Aid is made to county road systems not to exceed one-third of the cost of the road, including bridges. Roads are designated by the county council, and are subject to the approval of the Commission, and are to be built in accordance with the regulations of the State Engineer. This system, in its main features, is practically identical with that of Ontario.

Missouri.

Under an Act of 1907 state aid to county road construction was provided for. This is under the supervision of a State Engineer, who also contributes engineering and other services for the work. Aid is made on the basis of an equal distribution among the counties, and the sum of $650,000 has been voted in this way.

New Hampshire.

Under an Act of 1905 a State Highway Engineer was appointed. Aid is granted to townships, but varies according to the wealth of the municipality. State roads are built along the coast and in the mountains. Money is voted annually by the township councils for special work, which is subject to the approval of the State Engineer. The expenditure in 1909 in this way was $160,000.



A Short-Span Concrete Bridge in Wellington County.

The hand-rail is of reinforced concrete. The wing-walls are at right angles to the barrel of the culvert, and with hand-railing the full length, make a durable and useful guard, of good appearance.

New Jersey.

In 1891 New Jersey passed the first State Aid Law enacted in the United States. This provides for a Commissioner of Public Roads. Under this Act a township may petition the State Engineer for aid for special road work, either directly or through the county council. If the State Highway Commissioner approves, contracts may be let by the county council, subject to the State Engineer's approval. The State pays one-third of the cost of the work, the township pays one-tenth, and the county pays the balance. The county is required to employ an engineer and superintendent of construction. The amount available in 1910 for this work was $500,000, of which $300,000 was by direct State aid appropriation, and $200,000 was from an automobile tax.

New Mexico.

State aided roads are under the administration of a commission, consisting of the Governor of the State, the State Land Commissioner and the State Engineer. The State Commission builds such roads as are deemed necessary, and to these the county contributes amounts agreed upon. The Commission uses convicts on the roads.

North Carolina.

A State Highway Division was established in 1909 under the State Geological and Economic Survey. The administration is under one Highway Engineer, whose duties are educational and similar to the work of Ontario in collecting information and advising municipal councils.

Ohio.

The State of Ohio has recently adopted a State system in charge of a State Highway Commissioner. He will have three deputy engineers—one in charge of road construction, one in charge of maintenance, and one in charge of bridge construction and repair. A stated tax of one-half mill is established, and is expected to raise $3,000,000 annually to be equally divided among eighty-eight counties. The State will pay 50 per cent. of the cost of construction, the county 25 per cent., and the township 25 per cent. The township's portion is divided into two parts, 15 per cent. to be paid by the township as a whole, and the remaining 10 per cent. to be a charge upon the abutting property. For maintenance of all State roads, the State will pay 25 per cent. All work of construction and repair is under the direct supervision of the State Highway Commission. The duties of the Commissioner are largely educational and of an engineering character.

Oklahoma.

The State gives the engineering services of a Highway Engineer, and convict labor is used on the roads.

Pennsylvania.

A State Highway Department was established in 1903 with an appropriation for expending upon construction of $6,500,000. The administration is in charge of one State Highway Commissioner. Under the system, as established, a township may apply for aid for special roads either directly or through the county council. If the Commissioner approves of the road to be constructed, the cost is

distributed by the State paying three-fourths, the county one-eighth, and the township one-eighth. The State lets contracts for the work, and collects the municipal proportion of one-fourth from the township and county. The State also pays 50 per cent. of township expenditure where the townships have abolished statute labor, and collects the road tax in cash. For the maintenance of roads built by the State or otherwise, if they conform to the State standard, 10 per cent. of the entire State funds is set aside. The State aid to any municipality for road maintenance is not to exceed 75 per cent. of the entire cost.

South Carolina.

Under a State department road statistics are collected and convict labor is used on the roads. A road-building course is established in the Engineering Department of the State University.

Tennessee.

A State Highway Commission will present a report at the session of the Legislature of this year—1911—looking to the creation of a permanent highway department for State aid or construction. Counties are building roads by large bond issues in one-third of this State.

Utah.

Under a State law of 1909, a State Highway Commission was created, consisting of the State Governor, State Engineer, State Treasurer, and one member of the State Agricultural College, all serving without compensation. The duties of this Commission are to select and establish a State highway system; to administer the State road fund; to furnish plans and specifications to county councils; to publish information respecting road building. In poorer counties the State pays 80 per cent. of the cost of aided roads, and in wealthy counties the State will pay as low as one-half of the cost. Convict labor is used both on the roads and in the preparation of road material in the quarries.

Vermont.

A State Highway Department was established in 1906, under the direction of one commissioner. Work is planned systematically and directed by the State Department, but is in charge of township councils. The State appoints one supervisor for each county. The annual State appropriation is $75,000.

Virginia.

A State Highway Commission was established in 1906, to consist of four members, who are the State Commissioner and three professors of Civil Engineering in the State University, the State Agricultural College, and the State Military College respectively. It is the duty of the State Highway Commission to give educational and engineering services to municipal councils. Convict labor is employed on the roads.

West Virginia.

A State Department was established in 1909, and a State tax of one cent on one hundred dollars of assessment provided for. From this tax there was available in 1910 the sum of $110,000. State aid is granted to counties, the State paying one-third of the cost. Work is done under contract, and is subject to the approval of the State Highway Commissioner.

Washington.

A State Highway Department was established in 1907 under the direction of one State Commissioner. An annual state tax of one mill is levied, and in 1910 produced $374,000. State highways are constructed wholly at State expense, and aid is granted to counties, the State paying one-half the cost of construction up to the limit of the fund. Convict labor is successfully employed on state highways, and reports as to the results from this use of prison labor are very favorable.

Wisconsin.

A Commission will report to the Legislature this year. 1911, on a suitable state highway law. The highway division of the State Geological Survey has for some years given engineering services to municipalities in connection with road construction.

On the Massachusetts State Highway System. Treated with Asphalt Binder.

PRINCIPLES OF ROADMAKING.

Road building has been in progress in Ontario for somewhat more than a century. Commenced when the Province was an unbroken forest, the first attempts were of a primitive kind and were made about the time the art of roadmaking as established by Macadam and Telford was beginning to have an influence on the roads of the Mother Land, and, while much may be said in apology for, and admiration of, the early if crude efforts in Ontario, it is difficult to find an excuse for the disregard of all principles of road-construction which has characterized the later work, and which continues to be followed in many instances.

Road building is a work which responds in an amazing manner to good organization, to the efficient control of labor, to the use of proper machinery, and to a few facts of physical science. However simple this may appear in theory, the roads of the Province are an evidence of the practical difficulty there is in getting the work done in accordance with right principles. This means merely that road building is a work requiring more thought and more experience than is ordinarily supposed. The experience is being steadily gained but the public are finding that the building of good roads is at best a slow process and that we are commencing this important work at none too early a day.

This manual is not prepared as a complete description of the art of roadmaking, but a bare outline of the subject, suggesting only the chief and essential points to be observed in making common country roads of a type acceptable to the Province.

General Organization.

The greater road mileage of the Province must continue to be under the control of township councils, whose duties are fixed by the Municipal Act. Township councils have ordinarily used statute labor supplemented by an appropriation from the general funds. They may, however (and many have already done so), abolish statute labor and place the work on a money basis. With respect to statute labor, The Consolidated Municipal Act, 1903, Section 561, provides that township councils may pass by-laws as follows:

1. For empowering any person (resident or non-resident) liable to statute labor within the municipality, to compound for such labor, for any term not exceeding five years, at any sum not exceeding $1 for each day's labor;

2. For providing that a sum of money, not exceeding $1 for each day's labor, may or shall be paid in commutation of such statute labor.

3. For increasing or reducing the number of days' labor, to which the persons rated on the assessment roll or otherwise shall be liable, in proportion to the statute labor to which such persons are liable in respect of the amounts at which they are assessed, or otherwise respectively;

4. For enforcing the performance of statute labor, or the payment of a commutation in money in lieu thereof, when not otherwise provided by law;

5. For regulating the manner and the divisions in which statute labor or commutation money shall be performed or expended;

6. For reducing the amount of statute labor to be performed by ratepayers or others within the municipality, or for entirely abolishing such statute labor.

7. For reducing or varying the amount of statute labor to be performed by the ratepayers or others within certain defined areas in the municipality when, in the opinion of the council, exceptional circumstances exist rendering such reduction or variation equitable, and upon such conditions as may be imposed by the by-law.

8. For providing for the making and keeping open township roads during the season of sleighing in each year;

9. For providing for the application of so much of the commutation of the Statute Labor Fund, as may be necessary for keeping open such roads as last aforesaid, within such respective municipalities.

10. To compel all persons (resident or non-resident) liable to statute labor within any unincorporated village, the limits of which are defined in the by-law, to compound for such labor at any sum not exceeding $1 for each day's labor, and to provide that such sum shall be paid in commutation of such statute labor, and to enforce the payment of such commutation in money in lieu of such statute labor; and for the purpose of enforcing such payment the like remedies may be had, and proceedings taken against the person in default, as are provided by sub-section 1 of section 13 of The Assessment Act, in cases of neglect or refusal to pay any sum for statute labor commuted under section 10 of The Assessment Act. 3 Edw. VII. c. 19, s. 561.

County Councils have power under the Act to Aid in the Improvement of Public Highways, to assume a system of main county roads, towards the construction of which the Provincial Government contributes one-third of the cost.

Road Management.

Main features of management.

Road construction in any municipality is a work extending over a series of years and as such should, as far as possible, be under the continuous management of a superintendent who will carry out a systematic plan from year to year. In their main features, the general systems of county and township road management should be similar, the principle features being,—

(*a*) That all work be placed in charge of a road superintendent for the municipality, responsible to the council only.

The superintendent.

(*b*) That the functions of the road superintendent be that of an executive officer, similar to a municipal clerk or treasurer, reporting to and carrying out the instructions of the council.

The council.

(*c*) That the function of the council be legislative only, similar to that of a board of directors in a joint stock company; direct supervision of the work being left wholly to the road superintendent.

Continuous attention.

(*d*) That the roads receive attention throughout the year, repairs being continuous, not merely periodic; and for this purpose and for snow roads, that overseers or foremen be appointed for fixed beats, subject to the direction of the road superintendent.

Accounts.

(*e*) That an accurate method be followed by the road superintendent of keeping accounts for labor and material, furnishing proper pay sheets and vouchers for all road expenditure.

Duties of Road Superintendents.

Road superintendents' duties.

Duties of road superintendents should be specifically set forth in a set of instructions authorized by resolution of the council. These will require the superintendent,—

Attend council meetings.

(*a*) To attend regular meetings of the council, or special meetings, if so desired by the council, to receive instructions regarding works to be undertaken and carried on by him; also to report at meetings of the council as to the road work then in progress.

Report as to work required.

(*b*) To report to the council early in each year as to the work required the coming season, to carry out the instructions of the council with regard thereto, and to perform such business or other services as may be required of him from time to time, under the instructions of council.

Supervise all work.

(*c*) To supervise all work of construction and repairs on roads and bridges within his division.

Adopt best methods.

(*d*) To acquaint himself with the best methods of constructing and maintaining good roads, and of operating graders, crushers, rollers, and other road machinery used by the municipality.

Foremen and Inspectors.

(*e*) To employ such foremen and inspectors as may be required from time to time for any corporation work under his control; such

A Halton County Stone Road near Moffat, before Rolling.

foremen to be subject to dismissal or suspension at any time by the superintendent, who will forthwith report such dismissal or suspension to the proper committee of the council.

Employ men, etc.

(*f*) To employ and discharge either personally or through the foreman, all men and teams required to carry on the work, and to purchase necessary materials.

Emergency repairs.

(*g*) To see that all washouts, drain and culvert obstructions, bridge failures, and other unforeseen defects are repaired or guard-railed with the least possible delay, so as to prevent further injury to the road, or accident to the users of the road, and to act promptly in all cases of emergency.

Records, pay sheets and accounts.

(*h*) To keep an accurate record of the men employed and the work done, and to furnish (on forms prescribed by the council) pay sheets,

accounts and vouchers to the council or road committee at proper intervals for their approval in order that the municipal treasurer, under authority of their certificate, and upon being satisfied with the correctness of the statement, may issue cheques for the payment thereof.

(*i*) To examine and certify all bills or accounts against the corporation for material and labor, and to make or cause to be made the surveys, measurements and examinations necessary for such purpose. Material and labor accounts.

(*j*) To see that all works (especially work for the road grader) are staked out, and see that they are undertaken systematically, so that no time be lost in taking men, teams and machinery from one part of the municipality to another. Plan work systematically

(*k*) To have the custody of, and to be responsible for, all such plans and estimates as may from time to time be prepared for the use of the municipality. To keep a "Plan Book," which will contain a list of all plans, profiles and drawings in his custody; no plan to be allowed to go out of his office until a receipt for the same has been signed by the person to whom it is given. Custody of plans.

(*l*) To keep, or cause to be kept, a measurement book, in which will be entered all measurements of work or repair done, and materials delivered for the same, with such dates and names as may be necessary. Measurement records.

(*m*) To report from time to time to the proper committee having cognizance of the matter or to the council, as the case may require, any obstruction he may meet in carrying out his instructions and any matter upon which he may require advice or instruction. Unforeseen obstruction.

(*n*) To examine or cause examination to be made into all complaints of defective roadways or drainage, and to make such measurements as may be necessary to secure the conservation of the public thoroughfares and their maintenance against encroachment. Complaints and encroachments.

(*o*) To prepare (if a civil engineer) plans for bridges, supervise the performance of all work done by contract, and certify as to completion. Supervise contracts.

(*p*) To supervise the opening of snow roads under such regulations as, in the opinion of the council, the needs of the municipality may require. Snow roads.

(*q*) To report to the council at the close of each year, showing in detail the character, location and cost of each separate work undertaken. Final reports.

(*r*) To perform all county work in accordance with the regulations of the Department of Public Works, and to make such reports and certificates as may be required under the Act to Aid in the Improvement of Public Highways. County work.

Payment of Wages and Accounts.

The method of paying wages and accounts should be as follows (except that in townships the Reeve shall take the place of the Warden):

(*a*) All accounts for machinery, tools and repairs to same, materials for roads, or labor, shall be certified by the road superintendent as being correct, or he shall state where they are incorrect before being submitted to the proper committee to be passed for payment. Certificate of superintendent.

(*b*) He shall clearly show in his certificate whether the expenditure is for construction or repair, for new machinery and tools, or for repair What certificate shall show.

to machinery and tools, and in the case of materials and labor shall state the specific works or roads for which they are used.

The warden to countersign.

(*c*) All accounts and time-sheets before payment by the Treasurer shall be certified by the road superintendent, and shall be checked and countersigned by the Warden.

Time books for foremen.

(*d*) Two time books shall be furnished the foreman of each road division. The time-book shall be made up each Thursday night, certified by the foreman as being correct, and shall be immediately sent by him, under sealed cover, to the road superintendent.

Time-sheets prepared by superintendent.

(*e*) Time-sheets shall be made up by the road superintendent from the time-book, and shall include wages only, except such small expenses as the superintendent may necessarily make from time to time.

The warden to countersign time-sheets.

(*f*) When the time-books are received by the superintendent he shall check them over, extend them, and make up the time-sheets therefrom. The time-sheets shall then be checked over and countersigned by the Warden and handed to the Clerk to be dealt with as any other account.

How payment to be made.

(*g*) Payment of the amount of the time-sheets when countersigned by the Warden and approved by the proper committee shall be made by the Treasurer to the road superintendent. He shall then proceed to pay the foremen or men, in accordance with the time-books, taking from each his receipt, opposite his name, for the account paid him as set out in the time-book. In the event of a man being unable to sign his name, he shall make his mark, "John $\overset{\text{his}}{(\text{X})}$ Smith," and the same shall be witnessed by a man other than the foreman or the superintendent.

Duties of clerk.

(*h*) It shall be the duty of the Clerk to submit to the proper committe all accounts and time-sheets, properly certified by the road superintendent and countersigned by the Warden, and such accounts as are approved by the committee shall be at once transmitted to the Treasurer for payment.

Duties of treasurer.

(*i*) It shall be the duty of the Treasurer to pay all road accounts upon the certificate of the road superintendent, countersigned by the Warden, and approved by the proper committee of Council.

Road Overseers.

Duties of road foremen.

Overseers or foremen (with duties somewhat similar to pathmasters, or to a railway "section boss") should be appointed throughout the municipality, these in the event of a washout or sudden giving away of a culvert or bridge to protect it and report at once to the road superintendent; to act promptly in any emergency; to make minor repairs as directed by the superintendent; to collect men when necessary and open snow roads; to furnish to the superintendent an accurate record of time and work done; to perform such other services as the road superintendent may desire. On earth roads it could be a part of their duty to use the split-log drag; and on gravel or stone roads to keep the metal raked to place.

Supervision of overseers.

The road superintendent should examine the report of the overseer and the work done, before certifying to the time charged. The superintendent should, if practicable, personally pay for the opening of snow roads, having the time sheet signed by each man when payment is made.

A Wellington County Road, near Elora.

Inspection.

Benefit of inspecting work done by contract

Every contract of importance, especially concrete work in connection with bridges, should be under an inspector, appointed by the municipality. A thoroughly dishonest contractor can rarely be watched closely enough even by a skilled inspector, to prevent inferior work. A contractor who is known to be of this class should not be given work under any circumstances. A good inspector is at his best when dealing with a reasonable contractor, and it is there that the results are most marked in securing a high class of work. A good contractor is desirous of doing good work, but he, or his foreman, are very apt to be so occupied in obtaining material and hurrying their men that the quality of work is overlooked. A capable inspector can make himself of value not only to the municipality employing him, but to the contractor as well, by drawing attention to negligent workmen and advising as to methods and the placing of men. He should be able to see details which the foreman or contractor does not see, and can make himself the most valuable man on the work, both to the contractor and to the municipality.

Bridge Contracts.

Services of a civil engineer

If the road superintendent is not a civil engineer, the services of a civil engineer should be engaged from time to time as required, to prepare plans and specifications and let contracts for, and certify as to completion of, all steel, concrete, or other permanent bridges. The design of concrete abutments, piers and arches and the erection of steel bridges is work requiring the special training of an engineer, and municipalities will save money and best serve their ratepayers by recognizing this fact. A recent amendment of the Municipal Act requires that all county bridges shall be built in accordance with specifications approved by the Engineer of Highways for Ontario.

A Map of the Municipality.

Road map.

Every municipality should have, for the guidance of its council and road superintendent, a map showing accurately the roads and main features of the municipality. A tracing from which blue prints may be made is most serviceable.

Plan for Future Improvement.

Future work.

A municipal council, as a part of systematic road improvement, should lay down a scheme of annual work that will bring all the roads to fixed standards within a limited term of years, including the erection of culverts and bridges. Such a plan need not at once be worked out in all details, although this is desirable as far as possible. Unforeseen circumstances will arise to hasten or delay the work. It may take two or three years under such a plan to determine how rapidly it can be carried out. It may not be practicable in certain cases to frame a suitable plan in one year or two, but every municipal council should proceed as far as possible in a practical manner.

Labor.

Labour the principal item of cost.

The cost of roads consists chiefly of the cost of labor, including teaming. Very little is spent on material alone. Grading and draining are almost wholly a matter of labor. Gravel pits cost very little, but teaming gravel, handling it in the pit, and on the road, soon count up. The cost of broken stone grows out of the cost of labor for quarrying, crushing, hauling and spreading.

Cheap work and labour.

To build a road cheaply means a proper direction of labor. The reason contractors do work for less than municipal corporations is because they exercise all the skill possible in directing and using labor of men and teams to the best advantage.

Adapt men to work.

Plan the work carefully and put men in such places and under such conditions that they will do their best.

Instructions.

Give such orders and instructions as are necessary to show the men what is expected of them.

Organization.

Organize the work so as to get the best results from the men as a collective body; but at the same time encourage individual effort.

Interest of men.

Enlist the interest of the men so that they will work with their minds as well as with their bodies.

Promptness in starting.

Start work promptly each day, and do not stop before the proper time.

Prompt payment.

Pay workmen promptly, and carefully avoid errors in the amount paid. Nothing will so tend to disorganize work as irregularity in the payment of wages.

Specialize work of men.

Designate certain men for certain work, and keep them at it until there is no more of that kind of work to be done. Sub-divide duties and give each man as few to perform as possible.

Plan in advance.

Have the work well planned in advance, and keep it going in an orderly manner.

Good tools.

See that every man is provided with proper tools, and show the men how to use them. Do not use worn-out shovels. It is cheaper to buy new ones than to lose on the work of the men.

Balance men and teams.

The number of men and teams should be so balanced that all can be kept steadily at work. Too many men and not enough teams, or too many teams and not enough men, mean that one or the other will be standing in idleness a considerable part of the time.

Crowding teams in a pit.

Teamsters should drive into a gravel pit in regular order. They should not crowd one another in a small pit, so that some few can fill their wagons with good material, while others haul sods and boulders. There are enough of the latter on the road without paying for teaming more.

Fix number of loads.

A day's work in hauling gravel or broken stone, should be specified by the number of loads, according to length of haul.

Fix size of loads.

Every load should contain a fixed quantity—usually one and a half or two cubic yards. It takes very little more time to go from the pit to the road with a yard and a half of gravel than with only half a yard. The larger load represents a clear gain of the difference in size of the loads. Specify the size of the wagon box, and number of loads to constitute a day's work.

Use machinery.

Labor-saving machinery should be used wherever possible. This does not mean that there will be less work for men to do on the roads, but that more work can be done for the same outlay. Use grading machines, wheeled scrapers, distributing wagons for gravel and stone, stone crushers, etc.

Confidence of men.

It is essential to efficient work that a road superintendent or a foreman have the confidence and respect of the men under them. To maintain this, the superintendent and foreman should have their work well in hand; there should be no delays while the foreman or superintendent is wondering what to do next.

Let foreman instruct the men.

Control should invariably come from one man (but this does not mean that organization is merely an arbitrary arrangement of giving orders. Every man should feel an interest in his work.) A foreman only should give direct instructions or orders to the men under him. He is their superior officer; and no councillor, reeve, or even the road superintendent should intentionally or unintentionally weaken his prestige with the men by giving directions over his head.

The road superintendent only to instruct foremen.

For the same reason, a councillor should not give orders to a foreman over the head of the road superintendent. To weaken the authority of, or respect towards the superintendent or the foreman, on the part of those subordinate to them is to disturb and weaken the entire organization.

The superintendent and foremen work with their wits.

A road superintendent should not, as a rule, work with his men. It is his business to work with his wits, not with his hands, and to see that the work is properly organized. He may occasionally have to instruct a laborer how to do certain work, and it may take longer to show the man than to do the thing himself, but it is cheaper in the long run. This rule applies to a foreman as well, to a greater or less extent, according to the extent of the work and the number of the men under him.

Skilled labour.

Do not use masons, carpenters, and foremen, to do the work of laborers. A fifteen-cent man can do as much unskilled work as a fifty-cent man can. Provide enough laborers to assist the more expensive men. Keep every man busy at his own class of work, as far as possible.

Extra wagons.

Have sufficient extra wagons and men particularly on short hauls so that teams and teamsters will not be kept idle while wagons are being loaded, or unloaded. Use a bin at the stone crushers to facilitate loading, to save the time of teams, and the moving of extra wagons.

Steady pay men.

Steady-pay men should be kept busy on wet days repairing engines, wagons, lockers, putting handles on tampers, cleaning machinery, cleaning up the tool-house, marking or branding tools, packing cement bags, making tool boxes, etc.

Complete work speedily.

As far as is consistent with economy and thoroughness, the superintendent and each foreman should exert special effort to complete every work as speedily as possible.

Organize the work.

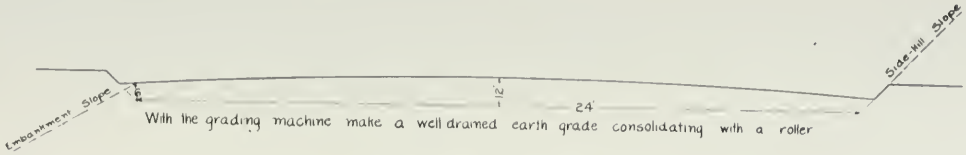
Good organization is the key-note of economy, thoroughness and speed in construction. Do not over-crowd the work with men and teams. Have a foreman or superintendent who can organize. That is his business.

Competition in work.

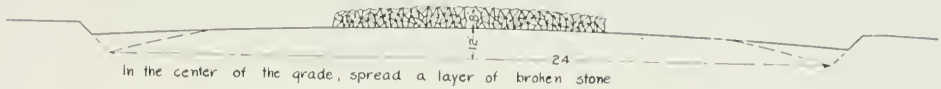
Workmen like athletic competitions. This fact may be effectively made use of to secure greater speed and better quality of work, and to preserve a keener interest among the workmen.

Making a Stone Road—Five Stages.

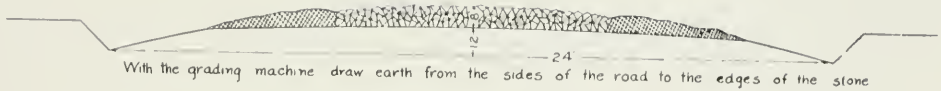
1. If a roller is not used make the crown higher to provide for settlement.


Embankment Slope
Side-Hill Slope
12
24
With the grading machine make a well drained earth grade consolidating with a roller

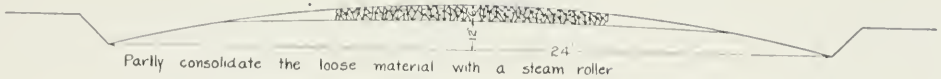
2. The dotted lines show the earth to be drawn in with the grading machine to hold the stone in place.



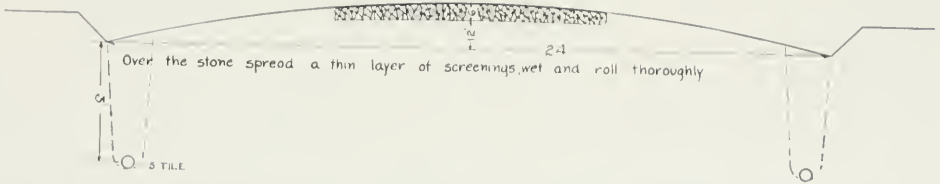
3. The gutters have been deepened by drawing the earth to the edges of the stone.



4. When partly consolidated less screenings are needed.



5. The completed road; care should be taken not to use too much screenings; and the open drains should be deepened as required. Tile are needed in wet soils only.



The above cross-sections show five stages in the construction of a single track road, built in the simplest possible way, suitable for the great majority of farm roads in Ontario. Open drains should have greater capacity in most cases to carry away freshets.

Divide every work into two or more portions, place a good working foreman, on each, give to each an equal number of implements, men and teams, make all conditions as nearly equal as possible to commence with, and encourage a spirit of friendly rivalry as regards speed, and quality of work.

Extra pay.

When winning a victory is not sufficient to force a contest, some other form of reward may be devised, such as extra pay to each member of the winning section.

Equalize work

If two or three miles of road are to be built, the distance may be divided into sections, keeping in view any special difficulties, and equalizing the work to be done, rather than the distance. Quarter-mile, half-mile or mile sections may be used, as are adapted to each case, adjusting distance to the class of work, distance from the quarry, or gravel pit, the number of men and foremen available, etc.

Bonus to teams.

The same principle may be applied to the work of teams. Extra pay may be given to the team hauling the greatest number of loads, the size of loads being definitely fixed. In some cases road superintendents have been known to bonus a teamster having a good pair of horses, to set a lively pace, and encourage the others to compete with him, both as regards size and number of loads.

Competition in quarry.

In a stone quarry, if two crushers can be operated, a contest may be created, and a vast increase in the output secured. If two crushers are being operated in any part of the county, records of the work in each may be regularly reported to the workmen at each. In all cases equality of conditions should be aimed at, so that the men will feel that the game is being fairly played.

Maintain quality as well as quantity.

Wherever a friendly athletic contest can be created, the work goes on more rapidly, the cost is greatly reduced, by wisely directing it, better results can be secured, and a good feeling is engendered among the men by the spirit of play added to their work. At all times maintain the rule that quality of work as well as quantity is necessary. The road superintendent must decide all contests on their honest merits, and give credit where credit is due. Rivalry of this description should be created without the workmen knowing the object of it; and if possible without realizing that it is being intentionally encouraged. It is a good road superintendent's trade secret.

Essential Features of Construction.

A dry subsoil.

Every good road has two essential features:

(*a*) The earth sub-soil is well drained, naturally or artificially, making a strong, unyielding foundation. Kept dry by drainage, it is acted upon to the least possible degree by frost.

A surface crust.

(*b*) The wearing surface is a smooth, hard and compact crust, which sheds water readily, and distributes the concentrated wheel load over a greater area of sub-soil.

A distinct coating.

The surface covering is generally a coating of gravel or broken stone, which should be put on the road in such a way that it will not, in wet weather, be churned up and mixed with the earth beneath. That is, it should form a distinct coating.

To accomplish this:

(*a*) The gravel or broken stone should contain very little sand or clay—it should be clean. Clean material.

(*b*) The road should be well turnpiked and crowned so as to shed the water to the open drains. Crown.

(*c*) Ruts should not be allowed to form, as they prevent water from passing to the open drains. Fill ruts.

(*d*) The open drains should have a sufficient fall and free outlet, so that the water will not stand in them, but will be carried away immediately. Open drains.

(*e*) Tile underdrains should be laid wherever the open drains are not sufficient, and where the ground has a moist or wet appearance, with a tendency to absorb the gravel and rut readily. By this means the foundation is made dry. Tile drains.

(*f*) In the absence of tile underdrains, the open drains at the roadside should be deep enough to make a layer of dry soil under the roadbed. Deep drains.

Effect of Traffic on Construction.

That the class of traffic must modify the method of constructing a road is a principle followed universally, but without any definite rule as to the work which is essential, and that which can be reasonably omitted. Modifications for traffic.

Whatever the surface of the road, whether earth, gravel, or broken stone, good drainage should always be provided. Every dollar spent on drainage is a good investment. Even for ordinary earth roads, grading, crowning, and under-drainage as well, are all profitable, and these are preliminary and lead up to the time when a durable surface crust can be applied. Drainage.

For light travel a narrow grade of about eighteen feet is ample. No roads should be wider than traffic renders necessary, as narrow roads are more easily and cheaply maintained than are wide grades. A width of 24 feet is ample for heavy traffic. Width of grade.

For light traffic gravel is a fair surface covering, but varies greatly in quality. For constant traffic, broken stone will in many cases be found economical, even if gravel can be procured in the locality. For traffic that includes heavy teaming, such as from quarries and brick yards, broken stone with a strong foundation of large flake stone, or a deep layer of gravel surfaced with broken stone are methods that are serviceable. Under heavy traffic rather coarsely crushed stone is more durable than fine metal. Metal.

In general for light traffic the drainage should not be slighted, but the width of grade may be narrowed, and the depth, width and quality of road covering reduced. For heavy and constant traffic, the wider grade becomes necessary, and the depth, width and quality of road metal should be proportionately increased. General conditions.

Location of Roads.

Road allowances in Ontario too often follow concession and lot lines, without regard to the suitability of these lines for the location of roads. Roads badly located.

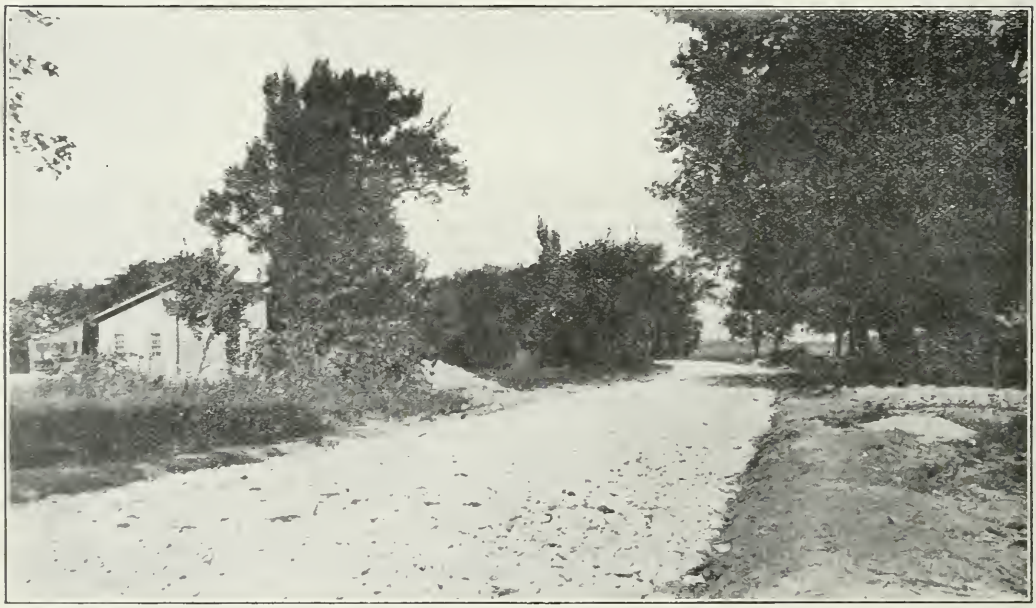
As a result, by unnecessarily crossing swamps, hills and rivers, the expense of making and maintaining the roads is much greater than it otherwise might be.

A change of location reduces cost.

To change the location of numerous highways in the Province would do away with many steep hills, expensive cuts and fills, and with a number of bridges. The unsuitability of the soil also, if low-lying, swamp, or composed of vegetable matter, may render advisable a change of location in favour of a course with a firmer and more easily drained sub-soil.

Roads around hills no longer than over hills.

It is desirable that a road between two places should be as direct and short as possible. But a road is not necessarily shorter because it follows absolutely one pointing of the compass. The line followed by a



On the Niagara Boulevard. Showing the foundation stone in place.

vehicle, leading up the hills and down into the valleys may be no shorter, nor, perhaps, as short, as a diverging route going around hills and following comparatively level ground. Cut an apple in two and lay one-half of it flat on a table. The distance from one end of the core to the other measured horizontally around is the same as if measured vertically over.

Good roads more valuable than square fields.

Farm owners prefer to have fields of rectangular shape, and there is a disadvantage in having an estate cut into separate sections by diverted highways. It is very much more in the interest of a property owner to have the roads leading to his farm good and easily maintained, than to have the farm in a compact block, but the roads to it impassable during a portion of the year, and even then expensive to build.

Powers of Councils.

Councils are authorized to alter the location of roads by the Municipal Act, in a manner fair to all parties; and it is advisable that this power be judiciously used.

The Road Surface.

Diversity of conditions.

Some municipalities of the Province have a plentiful supply of quarry stone, others have gravel, others have field-stone, others can readily procure any of these, while others have little or no road metal available. This diversity of conditions illustrates why definite rules cannot be formed for making one standard type of road for the Province. All conditions of soil, road metal and traffic have to be considered, and the best combination made to suit local circumstances.

Object of using metal.

The road metal of gravel or stone, is intended to form a crust over the natural soil, (and the natural soil should first be so treated as to keep it a distinct crust). The crust may be formed in various ways of which the following are the most common:

Crusher run.

The road may be surfaced wholly with crushed stone using "crusher run;" that is, a mixture of fine and coarse just as it comes from the crusher without screening. This makes a surface of uneven quality and strength, and hollows and holes appear quickly under heavy traffic.

Graded stone.

Screened stone may be used, placing the coarsest in the bottom and the finer on top. This makes a much smoother and more uniform surface than does "crusher run." In the latter case, the stones on the surface are of unequal size, the smaller wear more quickly than the larger sizes, and a rougher surface results.

Stone foundation.

Instead of making the road wholly of crushed stone, large flat stone, of sizes up to a foot or eighteen inches square may be laid on the earth sub-grade, and crushed stone spread over this. This as a rule is cheaper than all crushed stone, as a much thinner surface covering of fine material is required. Where flake stone are used in this way, perfect underdrainage is desirable, otherwise the large material is heaved by frost, and the finer material gradually works downward, the large stones coming to the surface. Instead of laying the stone flat, they may be placed on edge, the largest at the centre of the road, the top angles being chipped off and wedged into the voids between the stone. This last method is known as a "Telford" foundation.

Gravel foundation.

Instead of a base of large stone, there may be spread a foundation layer of gravel, on which to spread the broken stone. This method is useful where gravel of an inferior quality is plentiful. The gravel makes a stronger foundation than does the natural earth, while the crushed stone makes a more durable wearing surface.

Gravel surface over flake stone.

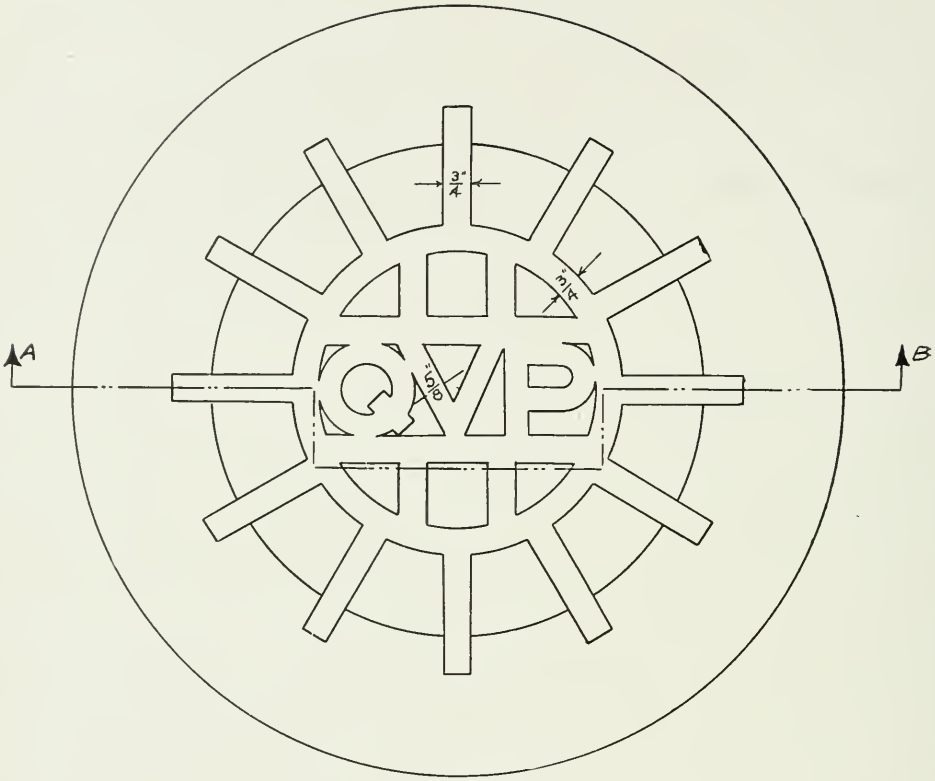
Good results may be had in some cases by using large flake stone for a base, and placing gravel on top. This process is useful principally where the earth foundation is very weak, and a gravel of first-class quality can be obtained within reasonable haul.

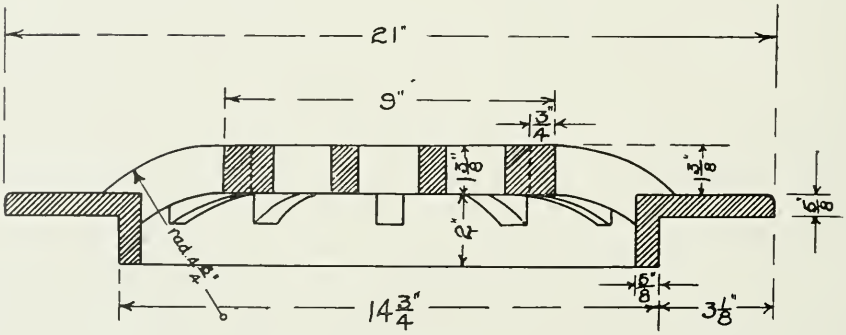
Gravel alone.

A common method consists of using pit-gravel in the ordinary manner, without stone. Unless of exceptional quality, gravel roads are not so lasting as broken stone, particularly for heavy or constant traffic.

Screened and crushed gravel.

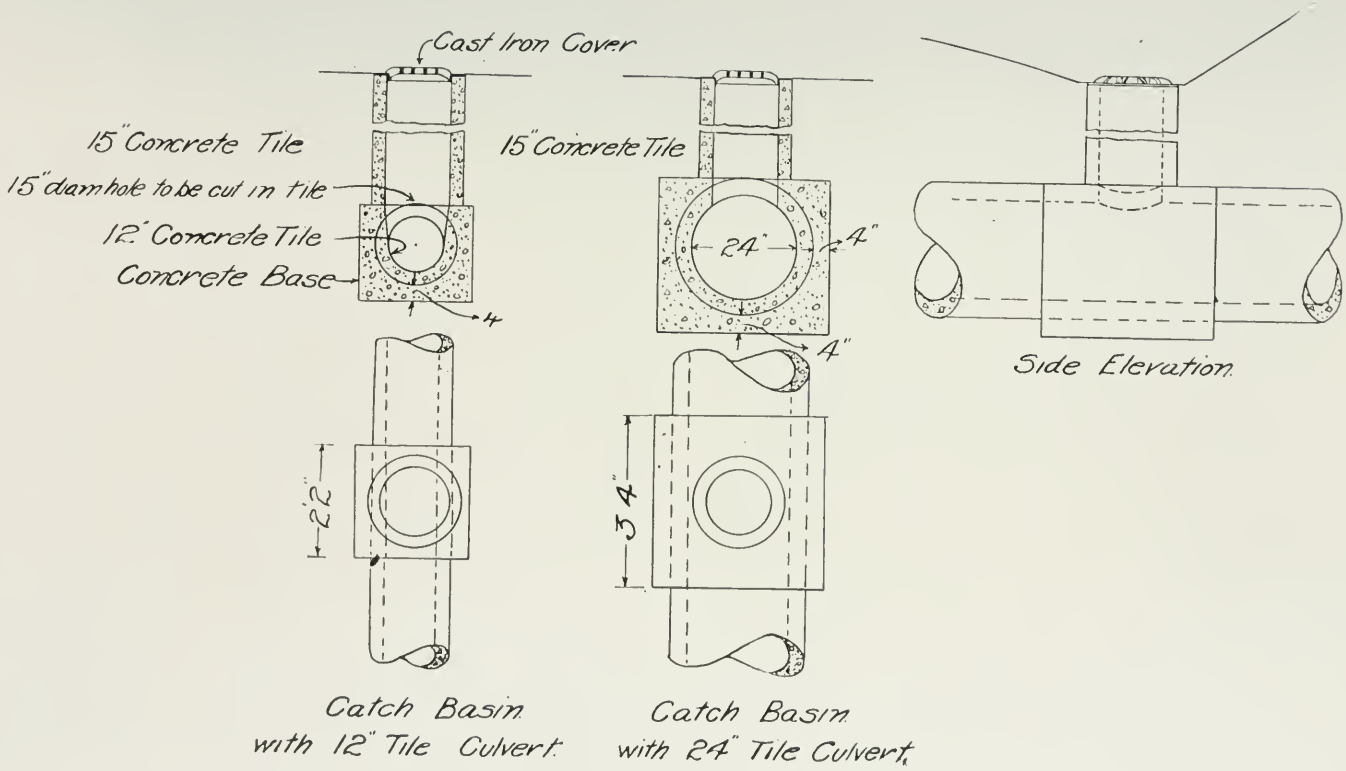
The most profitable method of using gravel is, as a rule, to pass all the material through a crusher and screen out the excess of sand and earthy material. Use the screenings as a base, and place the stone on top for a wearing surface. By using a well-equipped plant, and loading wagons from a bin, the saving in cost of loading may be made to pay the cost of crushing and screening.





SECTION AB

Catch-basin on the Niagara River Boulevard. Details of Cover.



Concrete Catch-basin on the Niagara River Boulevard. (See page 30.)

Earth Roads.

A good earth road necessary for gravel or stone.

Earth roads differ from gravel and broken stone roads principally in regard to the surface covering. A good earth road is a first step toward making good gravel and stone roads, and good drainage is the fundamental requirement of all. This is largely the object to be attained by grading and crowning, which form the principal part of the work of making an earth road.

Grade and drain.

In making an earth road observe carefully the requirements for grading, crowning and drainage.

Use machine.

Use a grading machine to construct the road, and a split-log drag to keep it in repair.

Crown sharply.

Keep clay or earth roads sharply crowned. To provide for settlement, two inches to the foot, from side to centre is not too great for a newly graded road. Clay roads are easily rutted, and the surface becomes "puddled." Without a good crown, water stands in the wheel tracks instead of flowing to the side drains.

Repair holes with earth.

Do not repair an earth road by filling holes and soft spots with gravel or broken stone. The latter materials do not wear down so rapidly as the earth around them, with the result that they become humps or ridges, and the effect is to make two holes where there was originally one. If the hole is wet drain it.

Level and roll earth roads.

The condition in which earth roads are frequently left when newly graded is exceedingly objectionable. No effort is made in some cases to level the surface. A rough mound of loose earth is left in the centre. Not only is this objectionable from a roadmaking point of view, but it is dangerous and a frequent source of accident. The road should at least be levelled so that consolidation will take place as evenly and as quickly as possible with the least interference with travel. The use of a heavy roller on clay roads, immediately after being graded will break down lumps and aid in compacting the road.

Drain completely.

Place drains and culverts wherever needed and always keep them free from obstruction. Use under-drains freely. If a complete system is not used, tile drains should at least be placed where the water does not leave the side of the road early in the spring, or wherever the ground appears to be continually damp. If open drains are kept in good working order, and if the road is properly crowned, its condition in fall and spring will indicate the points at which tile drainage is most needed.

Gravel Roads.

Durability.

Gravel varies greatly in quality, but is, as a rule, suitable for light traffic. It is less durable than broken stone, one cubic yard of broken limestone being equal to two cubic yards of average gravel. On clay, a standard depth of good gravel is eight inches. On a sand or gravel sub-grade, the depth may be reduced to five or six inches. On loam ten or twelve inches is at times advisable. More gravel is required between hills than on knolls or high ground. A width of eight feet is a fair average for country roads; the earth grade to be from 18 to 24 feet wide between the inside edges of ditches.

Make a good earth road first.

Before putting gravel on a road, see that a good earth road has first been made, as regards grading, crowning, draining and straightening.

Old gravel roads.

Old gravel roads with a solid foundation should have the shoulders of sod and soft material cut off and thrown outward—not drawn to the centre. To cut away these shoulders will generally do the road more good than to put on a covering of new gravel.

Selecting Gravel.

Best pit gravel.

The best pit gravel for roadwork is clean, free from an excess of sand and clay, composed of stones varying in size up to one and one-half inches in diameter, with just enough fine stuff to fill the voids and make a compact mass. The appearance in the face of a pit, is that of an almost solid mass of pebbles, from the size of marbles up to 1½ inches in diameter.

Stands upright in sp

Gravel of the above description which stands upright in the pit after the spring thaw, with no trace of slipping, is suitable for use on the road without any treatment.

River and lake gravel.

River gravel is frequently better than pit gravel from the fact that an excess of clay or sand is washed out of it, and it is less waterworn than lake gravel. Lake gravel if not too coarse or shaly, makes a very good surface, but packs slowly.

Sounds smooth and gritty.

The sound made by metal tires in passing over a gravel road should be continuously smooth and gritty. If the gritty sound is absent the gravel contains too much earthy material. An interrupted, intermittent sound indicates too many large stones.

Avoid dirty gravel.

"Dirty" gravel is the chief thing to avoid. Gravel containing much clay, or sand or earthy material packs quickly and makes a good dry-weather road. But in the wet weather of spring and fall it turns to mud and slush, and ruts readily. It wears out quickly.

Avoid fine gravel.

Avoid very fine gravel, and gravel that packs quickly. It lacks strength and is usually dirty. It is the stone that is needed on the roads. There is enough earth and clay on the roads without hauling and paying for more. A road surface of stony material will wear and keep its shape, but fine material becomes "slushy," flattens out under traffic, and the crown of the road is lost.

Treatment of Gravel.

Rake large stones forward.

If the gravel is of fair quality, except for a few large stones, rake these out as the gravel is spread on the road, drawing them forward so as to spread under the next load.

Station a man in pit.

If large stones are too numerous to be sufficiently removed by this treatment, station a man in the pit to rake out as many stones as possible from the gravel as it is being shovelled into the wagons.

Crush coarse gravel.

Gravel containing a mass of large stones and boulders should be treated as rock, and put through a crusher. A rotary screen attached to the crusher is desirable to separate the crushed stone into coarse and fine grades. Where there is an excess of clay, earthy matter or sand, a rotary screen is especially useful in removing such objectionable material. With a well-arranged plant, and by elevating the material into bins, the reduced cost of loading into wagons will frequently pay for the crushing and screening.

Screen dirty gravel.

Gravel which is not coarse, but which is "dirty" should be screened to remove the excess of sand or clay. A rotary screen may be used, operated by steam power. The gravel can be drawn in wagons to an elevated platform, dumped into a hopper from which it passes through the rotary screen, and from the screen to an elevated bin, from which the screened gravel is again loaded into wagons to be taken to the road. By means of the elevated bins the expense of shovelling into wagons is saved.

Using screened gravel.

Gravel when put through a crusher, should always be screened to remove an excess of sand or other earthy material. The usual method has been either to waste practically all of the fine screenings, or else to spread them on top of the coarser grades of stone. While a light sprinkling of the screenings may be advisable, it is a mistake to spread a thick coat of screenings. They will do no harm to the roadbed when used as a first course, on the earth roadbed, but should not be put on top of stone. This material is frequently of a pebbly character, and is very useful when spread over a clay sub-soil; or if the screenings contain much clay they are useful to spread over a sand sub-soil. In any event, they will do no harm to the roadbed when used as a first course, and will probably strengthen the road, but if spread in a thick coat over the stone they are not merely useless but harmful. When used as a foundation layer over clay, they improve the drainage somewhat, but it is always advisable to roll them before the stone is spread.

Useless material.

When screening removes so much earthy material that the cost of the remaining gravel is excessive, the gravel in its unscreened state is as a rule not worth hauling to the road. If the screenings are used, they should be put under, not on top of the coarser material.

Bond of stone permanent.

Dirty gravel packs more quickly than does clean or screened gravel, but the bond of clean gravel is much more durable. The latter is a firm mechanical clasp of one stone upon another aided by the cementing properties of the stone dust created by the stones rubbing against each other.

Strip gravel pits.

Gravel beds and pits should be stripped of the layer of earth and sod which usually covers them before gravel is teamed from the pit. If this is not done, as the gravel is removed from beneath it, the soil and sod fall in lumps into the pit, are mixed with the gravel and are drawn with it to the road.

Poor gravel loaded by teamsters.

Teamsters should be watched to see that, in hurrying to get the wagons loaded, they do not throw in refuse, earth, sod and large stones. There is enough earth and sod already on the roads without paying for teaming more.

Cost of gravel and size of loads.

The cost of gravel roads depends largely on the cost of hauling gravel. In teaming gravel the size of the wagon box should be fixed, and a definite number of loads should constitute a day's work. It is not uncommon to see teams going out of a pit drawing half or even quarter of a cubic yard, whereas a load should contain from 1½ to 2 cubic yards.

Spread gravel.

Always spread the gravel to the desired width, usually seven or eight feet, and deeper in the centre than at the sides. To leave gravel in an irregular ridge as it falls from the wagons is dangerous and wasteful. When left a mound of loose material it is avoided by users of the road until late in the fall, when the muddy and rutted state of the road com-

pels vehicles to pass along the mound. Gradually it is flattened down and, after a year or so, during which time it has been mixed largely with the soil beneath, assumes the shape of a road. Gravel placed on roads in this way is largely wasted.

When gravel is dumped loosely, the fine material sinks to the bottom, allowing large stones to protrude and roughen the surface. In placing gravel on a road, large stones not removed at the pit should be raked out of the material when it is being spread, and drawn forward so as to be beneath the next load. These stones should not be left in a mound but should be scattered, otherwise they create an uneven and wavy surface when the road settles. Loose gravel makes a rough road.

The gravel should be dropped from the wagons well back on the preceding load and then raked forward. The gravel consolidates at the point where it is dropped from the load, and to lightly "rake off the tops" leaves a deficiency of metal between each load, causing a wavy surface. Rake forward.

Prince Edward County Roadmaking Equipment leaving the County Shed and Machine Shop.

Broken Stone Roads.

Roads of broken stone, when properly made, are much more durable than gravel roads. Stone durable.

Stone should not be put on a road until the roadbed is prepared for it by grading, draining, crowning and straightening. First a good earth road.

Rolling is more important in the construction of a stone road than of a gravel road. Municipalities which use broken stone will receive decided benefit from the use of a road roller, economizing the stone, making a more durable road, at once fit to travel. Rolling.

If the road to be improved has an old gravel or stone roadbed which it is intended to preserve, cut away the shoulders of sod and soft material at the side, throwing this material outward with the grading machine, never drawing it to the centre. Old stone road beds.

The depth of broken stone used must be sufficient to consolidate into a compact layer. A sprinkling of stones over the surface is useless. It Depth of stone.

merely impedes travel on what might otherwise be a good dirt road. Six inches of consolidated broken stone is a standard thickness for a durable roadway, and it should be the aim of councils to thicken this covering as circumstances will permit. On loam a greater depth than six inches is desirable, but on a sand or stony subsoil, four inches is permissible at times. A greater thickness is required on low ground between hills than on knolls or high, dry land. A width of eight feet is a fair average for country roads; the earth grade to be from 18 to 24 feet wide, between inside edges of ditches.

Voids and shrinkage.

Loose broken stone contains about 50 per cent. voids, and will shrink nearly one-third when rolled. Thus a depth of 9 inches of broken stone will be reduced to 6 inches when thoroughly consolidated by rolling.

Quality of Stone.

Quality varies.

The quality of stone is not a matter of names, as varieties of the same kind, and even from the same quarry, may differ greatly in durability.

Stone decays.

Stone not only wears out on the road, but decays more or less rapidly from atmospheric influences. Avoid stone which decays or "weathers" rapidly on exposure to the atmosphere. Certain qualities of limestone and sandstone, hard and tough to quarry, quickly turn to clay when exposed to the air.

Field stone.

Field stone makes a durable road metal, but is less uniform than stone taken from a quarry. In consequence, the softer stones wear away, leaving a rough surface. All weak and weathered limestone and sandstone should be culled.

Limestone.

Limestone, granite and gneiss are very commonly used. Limestone is usually softer than others, but its binding qualities are excellent, enabling it to make a more waterproof road covering.

Heavy cubical stones.

A heavy stone is usually better than one that is light. A stone that breaks into cubical shapes is desirable; while one that breaks into thin, flat shapes is objectionable.

Simple tests.

Judge of the qualities of a stone by breaking with a hammer, wearing it on a grindstone, crushing it in a blacksmith's vise, scratching with an iron nail, breaking small pieces with the fingers. No test is so conclusive as actual wear on the road, and old roads of the locality may be instructive.

Grade stone by screening.

Broken stone should be separated into grades according to size, the coarser stone to be placed in the bottom of the road and the finer at the top. This grading of stone is done by means of a rotary screen attached to the crusher. If the stone is placed in the road without being graded in this manner, the smaller stones wear away more rapidly than the larger, and a rough surface results. Large stones at the surface, moreover, are more apt to become loose, to roll under the horses' feet or the wheels.

Layers of stone in road bed.

For country roads there should be placed in the roadbed:

(*a*) In the bottom a layer of stones such as are refused by a 2½ inch or 3 inch ring—"tailings."

(*b*) On this a coating of stones such as will pass through a 2½ inch or 3 inch ring.

(*c*) On this a sprinkling of screenings—that is, the dust and chips created in crushing, and including all that passes a 1½-inch screen. Screenings.

Course (*c*) should be only a thin covering, not more than enough to bond the stone when rolled. The main body of the road should be made of the grade (*b*).

Bonding Material.

Given a substantial foundation and a suitable surface material, the stability of a road is largely dependent upon the bond; that is, upon the filler or binding material, and consolidation by rolling. For a crushed stone road, the standard material is stone screenings, consisting of stone dust, and chips produced in crushing. These are commonly spread over the surface of the broken stone to give a smoother surface and to aid in "packing." Only a small quantity of the screenings should be used, and these should be well washed down into the coarser stone by a sprinkling cart preceding a heavy roller. This process will bond the material firmly, the stone obtaining a firm mechanical clasp, and the screenings are largely a cementing material to help unite the stones into a water-proof covering. Use stone screenings.

Sand is by no means as useful a bonding material as are stone screenings. The sand has not the cementing property that the screenings possess. Sand will aid the road to pack quickly in dry weather, but in wet weather the weakness of the bond becomes apparent. The sand tends to hold the stones apart rather than aid them to unite strongly together. Sand is inferior, and is harmful when in excess.

Gravel which packs quickly is very often imagined by roadmakers to be superior to gravel which is cleaner, but which packs more slowly. This is a mistake, as gravel that packs quickly, as a rule contains an excess of earth and sand, whereas, it is the stony material that is required on the road. Dirty gravel.

Where screened gravel is used in the construction of a road, it is frequently good practice to use the fine sand and other screenings taken from the gravel, to put in the bottom of the road. A very slight sprinkling of the screenings may be used over the screened gravel; or a much more satisfactory roadbed will be produced if sufficient stone screenings are obtained from a quarry by rail or otherwise, to sprinkle lightly over the surface of the stone to bond the material. Bonding screened gravel.

There is a great difference in the bonding value of stone screenings. The dust of certain limestones will cement and re-cement readily; while others are of a more crystalline and sandy quality, and the screenings do not unite the stone so firmly, nor do they make the surface so water-proof. Different stones and the value of their screenings.

The Natural Soil.

The primary foundation of a road is the natural soil. Some soils are stronger than others under any circumstances, but all are strengthened by under-drainage to remove surplus water. The condition of the natural soil in the spring is the chief consideration, as, after the heaving action of frost, wet roads are weaker than at any other time, and the metal crust is most likely to be cut through. It is to be laid down as a fixed rule that the natural soil must have good surface drainage. Sub-soils.

Inspection of Road Construction in Peel County.

by grading, and turnpiking, crowning, and making open drains with free outlets at the lowest points on or near the road. Further, that wet soils must have under-drainage with ordinary farm tile; while nearly all soils will be much benefited thereby, making a stronger and more durable road, and greatly decreasing the cost of maintenance. This preliminary treatment of the roadbed may be considered in relation to the natural soil underlying the road, varying with a rock bottom, clay and sandy loams, light sand, quicksand, black muck and coarse, sharp sand and gravel:

Rock near the surface.

Where rock comes to the surface, or very close to it, a peculiar condition exists. The rock is, as a rule, in horizontal beds, and is uneven, so that water can collect on it in depressions. A thin layer of earth over the rock becomes water-soaked, and in the spring especially, is very weak. When broken stone is laid over this earth in the usual manner, the tendency is for the stone to settle while the earth oozes up between the stones. In such a situation it is desirable that, where hollows occur in the rock, shallow outlets be cut at the edges to provide drainage as far as possible. If the layer of earth is thin, it is better to scrape it away, and in its place put a bed of coarse stones, on which the finer crushed stone may be spread. In place of the large stone, gravel is very useful as a base, even if not of first-class quality.

Deep clay soils.

Deep clay soils should be underdrained, and the trenches over the tile partially filled with gravel, broken stone, sharp sand or other porous material. Clay is a very strong foundation when dry, but absorbs water with great avidity. A plastic clay will absorb nearly one-half its bulk and weight of water. Unless provision is made for drainage, it is heaved greatly by frost, and is weak and honey-combed in the spring.

Blue clay.

With stiff blue clay, the ground water must be removed as far as possible if stable results are to be secured. In addition to the open surface drains, one or two deep tile drains should be laid along the roadside underneath the open drains, and leading to free outlets. It is customary to place one tile drain on an up-hill side, and one on each side in a cut or on a level grade. If the clay contains a considerable proportion of coarse sand, it drains more freely than does pure blue clay, and one tile drain along the roadway may do all that two can do if placed at sufficient depth. If, on the other hand, the sand is fine-grained, it may be in greater need of deep drainage than if it were pure clay, becoming, when wet, almost a fluid in consistency.

Clay loam.

A clay loam is a mixture of clay and sand, with clay in excess of the sand, while a sandy loam is a mixture of clay and sand, with sand in excess. As with clay, loams require underdrainage; and if the sand is of the nature of quicksand, good under-drainage is absolutely necessary to make a reasonably strong foundation. There is another soil similar to these, a clay with sand veins through it, which is very weak when wet, and requires good underdrainage.

Quicksand.

Quicksand is a sand that is very fine, and the particles are rounded. There is about the same difference between a quicksand and a sharp sand as between gravel and broken stone. A quicksand when wet has no supporting power, and becomes almost fluid in consistency. Quicksand must be well underdrained, and tile laid in it should be surrounded with sawdust, cinders, cheap cotton or sod.

Sand.

A sandy road approaching a quicksand or fine sandy loam is improved by spreading over it a layer of clay, either without gravel or stone, or as a preparation for gravel or broken stone.

Muck.

Muck such as is found in swamps is a vegetable mould, and is very weak, especially when wet. A layer of clay over it is a good preparation for gravel or broken stone.

Coarse sand and gravel.

Coarse, sharp sand, and gravel make strong foundations for roads. But unless they are dry, there is a heaving action that is objectionable, especially if large stones are used in making the road surface.

Sand and gravel.

Sand or gravel sub-soils may demand little or no tile drainage to produce a reasonably strong foundation, but tile drains should be put at points where the condition of the road under traffic indicates that the "water line" should be lowered, or where "spouty" spots occur in the spring.

Springs.

In all classes of soil, springs and wet spots on hills have to be watched carefully, and in every case such places require under-draining.

Road Drainage.

Roads good when dry.

Roads are good in summer because they are dry. Roads become axle-deep with mud in spring and fall, because they are water-logged. Water accumulates on the surface and under the surface of the roads in fall, winter and spring, until the soil is in a semi-fluid condition. Acted upon by frost, expansion of this water in the soil leaves it loose, open and porous. Whatever other quality a good road may have, it must be well-drained either naturally or artificially.

Improvement temporary without drains.

Past expenditure on roads, and the present ordinary methods of expenditure, have been of but temporary service, for the reason that roads have been left in an incomplete condition, with little if any drainage. Traffic during one or two springs, when the roads are in a water-logged and flat condition, cuts through the surface covering of gravel or stone. The mud, under pressure, oozes through gravel and stone, and the road is churned and flattened back to its original state.

To macadamize is to drain.

Roads in Canada to-day are bad for the same reasons that they were bad in England a century ago, before the time of McAdam. They are drainless quagmires, swallowing the stone and gravel placed on them. Townships commonly spread stone on their roads and speak of them as being "macadamized." To macadamize our roads means, in the first instance, that we must thoroughly drain them by surface and under-drainage. The essential principle of a macadamized road is drainage. This was the principle advanced and introduced by McAdam, and it is the one so commonly neglected throughout Canada to-day.

Trenches are not drains.

Roads with a high grade are not necessarily well drained. It has been the practice to excavate from the sides of the road, and throw the earth in the centre of the road allowance, to raise and level the grade. Unless the excavations on the side of the road have a continual fall to outlets in such a way that the water will flow away, they are not drains. Excavations without outlets are merely elongated ponds, which hold the water and permit it to soak into and soften the roadway. In this way, mud is formed underneath the roadway, and mud below the surface is just as injurious as mud on the surface. Drains must cause the

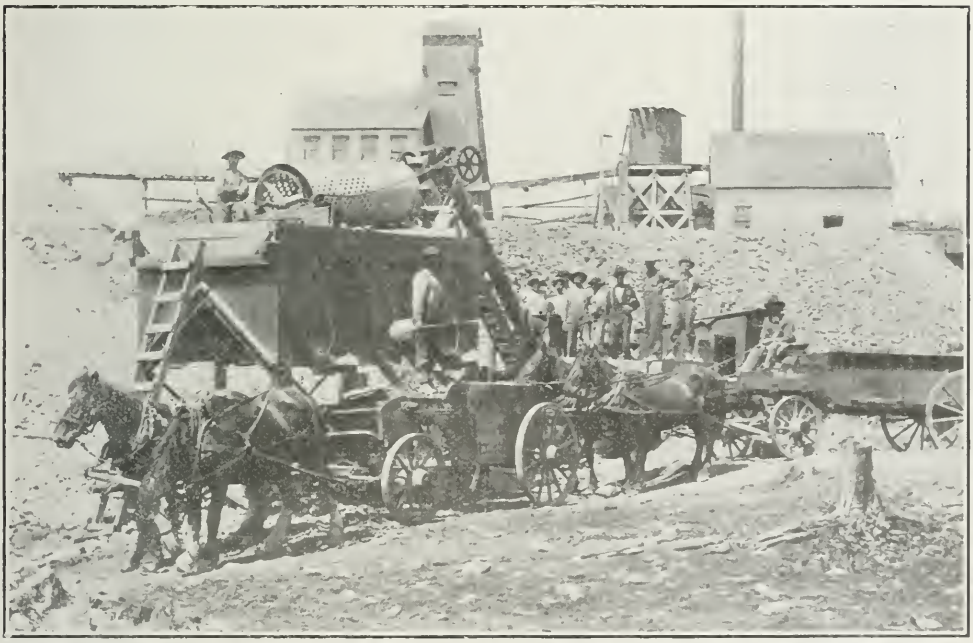
water to flow away, not soak away. As soon as water falls on the road-allowance, it should be made to flow down grade until it is entirely drawn from the roads.

Drain roads.

Good drainage is the first essential for all roads—earth roads, gravel roads, broken stone roads.

Drain before gravelling or stoning.

Road construction is largely a matter of good drainage. Do not waste gravel and broken stone by putting them on roads that are not properly drained. The natural soil over which the road passes must be kept strong enough to support traffic. Dry earth will do this. Wet earth will not—for wet earth is mud, soft and yielding, whether on the surface or below it. Mud below a bed of gravel is worse than mud on top of it. The reason roads are good in summer is that they are dry. The real roadbed must be below the surface.



Roadmaking in Coleman Township. Mine dumps are utilized for road material, the stone being broken by the township crusher.

Pure sand an exception.

The only road that will not be improved, by the most perfect system of drainage that can be given it, is a road of pure sand. In all other cases, every dollar put into efficient drainage is well spent.

Present practice defective.

The deficient drainage on many roads consists only of open ditches on each side of the graded portion, with a depth of about eighteen inches. They are frequently carried through rises of ground, past natural water courses. Little attention is given to the regularity of the grade in the bottom, or to the amount of fall, as evidenced by the varying depths of stagnant water at wet seasons. The object of these drains was more to procure earth to raise the centre of the road above the water-line than to lower or carry away the water. Very often they have no outlets.

Requirements of drainage.

Drainage implies,—

A crown.

(*a*) That the road is crowned to shed water to open drains or gutters.

Surface drains

(*b*) That the open drains have a constant fall to a good outlet.

Deep drains.

(*c*) That water rising in the road from below is carried away by deep or tile drains.

A smooth surface.

(*d*) That the surface of the road is kept smooth, free from ruts and hollows, so that water will not remain on the surface. Gravel and broken stone is placed on an earth road largely for this purpose.

The natural soil.

The method and extent of drainage must depend largely upon the character of the soil over which the road passes; clay, loam, gravel, sand, swampy, springs, flat, undulating, are all terms suggesting conditions that modify the plan of drainage.

Determine main outlets.

To secure good drainage, first determine the main water courses and low places crossing or adjacent to the roads, which can be used as outlets.

Then grade to outlets.

Grade the road, and the open drains, so that the water will flow steadily to these outlets.

Culverts.

Place culverts and waterways as frequently as required to carry water across the road.

Importance of outlets.

A drain without an outlet is useless—or worse than useless. If there is not an outlet, the water is held in elongated ponds by the roadside, to to soak into and soften the travelled roadway. This water is drawn up into the entire roadway just as a sponge will absorb water and hold it in all its pores.

Drain across private property.

Rather than spend money year after year in a wasteful effort to maintain roads without drainage, it will be economy to provide proper outlets, even if it is necessary to carry the drain a considerable distance across private property.

Discharge in small quantities.

Discharge water in small quantities into frequent outlets. Do not carry it long distances past natural outlets. It is the accumulation of water to a large volume that causes severe erosion and washouts.

Roads not for farm drainage

Roads are not intended for use in draining adjacent farm lands. To construct deep and dangerous drains in the public highways for this purpose, carrying water out of its natural course, is illegal and extremely objectionable.

Tile Drainage.

Water rises from below.

A large proportion of the water falling in the form of rain and snow sinks into the ground, and reaching a hard-pan, rock or other impervious stratum, gradually rises in the soil just as water rises in a pail into which it is poured. It is this water rising from below which is commonly neglected, and which causes roads to be so bad in the spring of the year. Tile drains have the same effect as a hole in the side of a pail in keeping down the water-line.

Water expands when freezing.

Water expands about one-eighth of its volume in freezing, and exerts an outward pressure of 300,000 pounds per cubic foot. This causes a saturated roadbed to heave at times several inches. This heaving means that the road bed has been honeycombed by expanding ice. When the thaw comes, the porous, wet soil, is mud to the axles, with no supporting power. Tile drainage removes this sub-soil water, preventing the injurious effect of frost.

Effect on clay and porous soils.

A soil retains in its texture, by capillary attraction, a certain amount of water. In the case of a plastic clay soil, which will absorb nearly one-half its weight and bulk of water, the water retained in this

way may be the cause of injury. In the case of gravelly, sandy or other porous soil, it is necessary to remove only the water held by hydrostatic pressure in the foundation of the road. The effect of this is, that, with a clay sub-soil, under-drains are nearly always beneficial in securing a strong foundation, and are necessary for traffic of even moderate degree. With porous soils, on the other hand, the necessity and means of drainage will depend upon the height to which the water rises in the foundation, and the direction from which it comes. When a strong foundation is needed, these under-drains should be three feet below the surface of the sub-soil.

Fall required.

Gravity is the sole cause of the flow of water in tile drains; therefore the tile must be laid with a continual fall so that the water will flow down a slope. Lay the tile on an even grade with a constant fall to a good outlet; the fall being not less than three inches in one hundred feet, if possible.

Laying to grade.

For tile drains of any considerable length, or where the fall is uncertain, the line along which the tile are to be laid should be staked, and a survey made by an engineer, to determine the amount of fall from the head to the outlet. The tile should then be graded evenly, to depths measured from the stakes, by the "target" or "line and gauge" or other accurate method. The "water test" and similar methods of laying tile are not satisfactory except for short drains where the fall is very evident.

Commence to dig at the outlet.

Commence to dig the trench at the outlet, and proceed up grade. In taking out the last draft, do not dig deeper than the grade line. The bottom of a tile drain should be dressed with a curved tile-hoe, so that the tile will lie securely in place. In the case of large drains, a curved shovel may be used to give the bottom of the trench the necessary groove.

Laying the tile.

Commence to lay the tile at the outlet, and proceed up-grade. Lay the ends of the tile as closely as possible, turning them around until the upper edges touch (except in sand when the bottom edges should touch). Whenever, in making turns or because of irregular tile, there is a crack of a quarter-inch or more, cover it with a piece of broken tile. The upper part of the trench may be filled with a grading machine or a split-log drag.

Distance drains will draw.

As a rule, a tile drain, laid in close clay soil, will drain six times its depth on each side. In porous soils they give good results for much more than this—at times up to 15 or even 20 times the depth. Except in a stiff clay, a line of tile laid on one side of the road, at a suitable depth, will do nearly as much for the roads as tile on both sides will do. If on a side-hill, with one side of the road higher than the other, lay the tile on the high side to intercept the soakage.

Size of tile.

The size of tile required for any given situation will depend upon the length of the drain, the fall, and the amount of water to be carried away. The steeper the fall, and the shorter the drain, the more rapidly it will carry away; and in consequence the smaller the tile need be. For long drainage systems smaller tile are needed near the head, and large near the outlet. The tile used should not be less than four inches diameter. Smaller tile, while theoretically sufficient, are too liable to become blocked by slight depressions or irregularity in laying. In general, a

four-inch tile may be used for a drain 800 or 1,000 feet long; each additional 400 feet to have tile of one inch greater diameter. To double the fall of a drain increases the capacity 40 per cent. An increase of one-third diameter doubles the capacity. To double the diameter increases the capacity 5⅔ times.

Protect the outlet.

An unprotected outlet of a tile drain is very apt to be broken and obstructed by horses or cattle stepping on the tile. The outlet should be set in a head-wall of concrete surrounding the last tile, and extending below the action of frost. If this cannot be done, a concrete tile may be used at the outlet.

Hill Improvement in Peel County—Commencement.

Best location and depth.

In level land, lay the tile at the side of the road under the bottom of the open drain, at a depth of 2½ or 3 feet. On hills, place the tile under the shoulders, where the trench will not be washed out. At or near the upper end make a vent into the tile to permit a draught of air through the drain.

Springs.

Sub-soil water frequently comes to the surface in the form of springs or water veins, which create mud holes. These are common in hills which have been graded, but in many cases appear in the level ground. These should be tapped by the drains running into the heart of the spring.

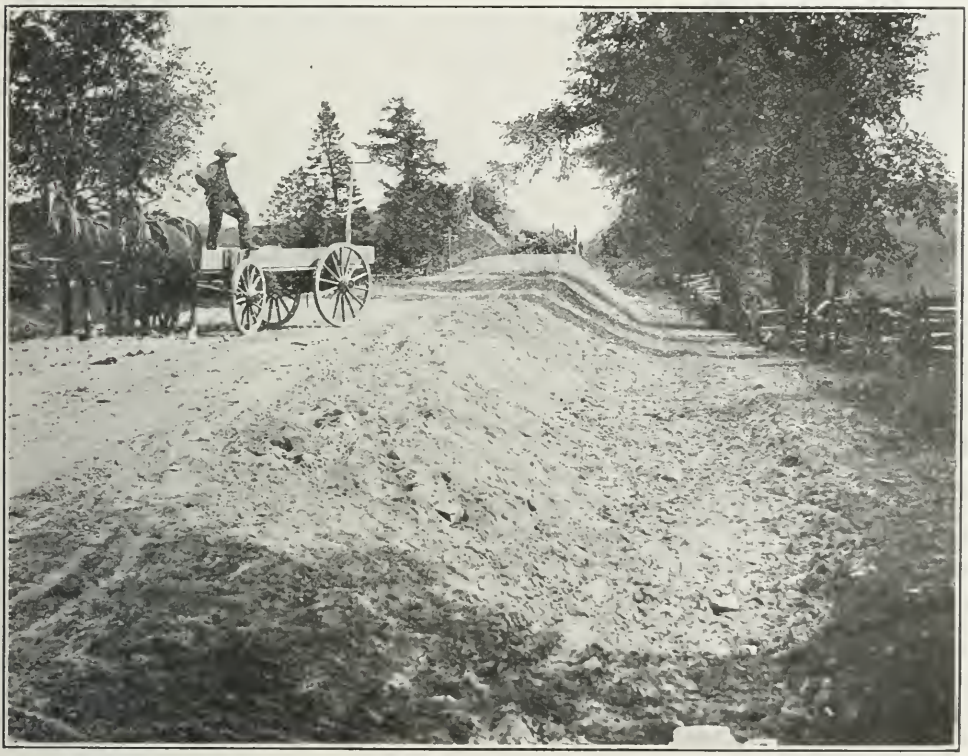
Permanency of tile drains.

Tile drains are permanent. They take the place of deep, open drains and cost less to maintain. Their effect is most noticeable in spring, causing the roads to dry up quickly. In this way, and throughout the year, they save the gravel or stone covering, as there is less mud

for it to sink in. A less depth of gravel or broken stone is required on roads that are tile-drained.

In sand and quicksand, surround the tile with sawdust, cinders, cheap cotton or sods, to keep out the silt. A six-inch coating of clay is often sufficient. If settlement is at all likely, boards should be laid in the bottom of the trench and firmly pressed down, and the tile laid on these. In plastic or fluid clay where it is feared that the clay will enter and clog the tile, locomotive cinders is superior to gravel or broken stone to use around the tile. Clay will mix with gravel, stone or furnace slag, but will not penetrate locomotive cinders. In stiff

Tile in quicksand and in clay.



Hill Improvement in Peel County—The Completed Grade.

clay, partially fill the trench with gravel, coarse clean sand, sawdust or other porous material, to more freely attract water.

The roots of trees, particularly the willow, are apt to enter and, in time, block the tile. Where this is to be anticipated, the joints of the tile should be cemented for a distance likely to be reached by the roots.

Tile blocked by roots.

The location of tile drains with respect to the road should be varied with circumstances. The most effective type is a system in which there is a tile drain on each side of the roadway underneath the open gutters, with V-shaped drains at intervals from the centre of the roadbed to the side drains. From this the scale descends to drains at each side of the road; then a drain at one side only or in the centre of the road; then only an occasional drain at springy or damp points.

Location of tile on the road.

Municipalities should commence to underdrain all roads, first placing tile drains where they are needed most, in low-lying sections, where

Under-drain all roads.

water is seen to remain longest on the surface in the spring or after a heavy rain; where springs have a tendency to appear; or where the ground is found to be cold and wet during the summer.

The Camber or Crown.

Build narrow roads, sharply crowned.

Roads must be crowned or rounded with the highest point at the centre, to turn water to the side drains. A common defect of roads is that they are too wide and too flat. Narrow roads, sharply crowned, will remain in good condition with a minimum outlay for maintenance.

Roads settle rapidly for first year.

A road always settles rapidly for the first year after construction; and this settlement continues in a less degree for all time. A road when first built should be too high in the centre. If not, in a year's time it will be too low to properly shed the water; and in three years, the road will require re-construction. It will be flat and cut into a series of ruts.

Width and height.

Roads are now usually graded with road machines, and are curved from the bottom of the open drain to the centre of the road. A width of twenty-four feet between the bottom of the drains with the central eight feet metalled is ample in most cases. When made of this width the centre of the road should be two feet higher than the bottom of the ditch. This gives a rise of two inches to the foot from the bottom of the drain to the top of the road.

Crown.

The metalled surface of the roadway should have an average crown of at least one-half an inch to the foot. The earth shoulders should drop off more sharply to the side drains with a fall of not less than one inch to the foot.

Cut away soft shoulders of old roads.

Old stone and gravel roads when being reconstructed should be given a good crown. In doing this, do not draw in the soft material, sod and earth, from the shoulders. These shoulders should be cut off and turned outward

Renew stone roadbed with hard metal.

Having cut off the shoulders, renew the crown by putting on new material. If in low places this cannot be done, knolls on each side can often be cut off and the old stony material used in the low places.

When to tear up old road-bed.

If the old road has become too flat, and the grading of knolls does not offer a solution, it may be necessary to loosen up the old stone or gravel, particularly at the edges, with a pick plow, grade it to the centre, and then place new material.

Place no soft material over an old road-bed.

Rebuilding old roads if they have become very flat is often more difficult than making new roads. To renew the crown by drawing soft material from the sides, placing it on the old and hard roadbed, then over this spreading new metal, is very objectionable. The hard surface of the old road will not let water drain through it. The earth between the old and the new metal in the first wet weather is converted into mud and muck. The new metal is forced downward under traffic and the mud will ooze through it to the surface.

Earth tracks at side of gravel or stone.

Roads are occasionally made with a wide flat grade; with a gravel or stone track on one side, and a clay track on the other. Such roads are neither good in theory nor in practice. The earth track becomes cut up and rough. Having insufficient crown, surface drainage becomes impeded, the whole road soon becomes flat, rutted, shapeless and water-logged. It is not a type of road that will last.

Width of Roads.

The graded roadway shall be no wider than traffic demands. Twenty-four feet from water-table to water-table is ample for heavy traffic near towns and cities; eighteen feet is sufficient for the great majority of cases. Every unnecessary foot of width makes a road more expensive to maintain. Width 18 to 24 feet ample.

A wide roadway looks well and is more convenient for traffic if kept in good condition. But a wide, well-built, well-kept roadway is costly. A narrow roadway in good condition is vastly better than a wide, but poor road. Build narrow roads.

Near towns and cities, where travel concentrates, it is well to provide a roadway suited for two lines of traffic, so that vehicles can pass without going off the metal and sinking in the mud. This should be Widen near towns and cities.

A Wellington County Bridge, near Guelph. The hand-rail is of concrete.

done on a twenty-four foot grade, by increasing the width of gravel or stone, not by widening the grade. Away from the town, eight feet of metal for a single line of travel is sufficient.

Gravel or stone roads should not have an earth grade so wide or flat that there can be a track for travel on the earth shoulders at either side. The use of the sides in this way causes ruts that interrupt surface drainage, and greatly injure the stone roadbed. Gravel or stone proportionate to width.

Narrow roads, well turnpiked, sharply crowned, are best adapted to Ontario conditions of climate, traffic and methods of maintenance, except on heavily travelled roads. Narrow roads suited to climate.

Straight Roads.

Work should always be staked out in advance of grading, draining or metalling, so as to keep the road as straight as possible or in the most desirable location. Stakes should be about 12 or 18 inches long, and Stake in advance.

placed about 100 feet apart on straight stretches. On curves, they should be close enough to guide the plow, grader, and spreading of stone.

Placing stakes.

The centre of the road should first be determined at points several hundred feet apart—as far as pickets can be seen. Then measuring a uniform distance to each side of the road where a line of stakes will not be disturbed in grading, (say 20 feet from the centre) plant pickets. Measure with a tape line and place stakes temporarily at proper intervals (usually 100 feet); and when this is done sight them into a true line between pickets. An engineer can use a transit for this work; but a reasonably true line can, with experience, be sighted in with the eye.

Plow a furrow.

From the stakes so planted, foremen can measure to the centre or side of the road, drains, edge of metal, etc., and keep the work in alignment. If being prepared for grading, a furrow may be turned along each side of the road in line with the stakes to guide the operator of the grading machine.

Pioneer conditions.

The graded roadway should be straight and located in the centre of the road allowance. Ontario roads have grown up largely from pioneer conditions, when it was necessary to wind in and out to escape stumps and logs, sloughs and boulders. These conditions no longer exist, and as a first step to permanency the roads should be straightened.

Crooked roads will be torn up.

To delay straightening the roads means that much of the work now being put on them will be torn up when the straightening of the road is undertaken. Keep the earth grade in the centre of the road allowance, and the metal in the centre of the grade.

Employ a surveyor.

Roads should always be carefully staked out in a straight line for the grading machine. If the fences are off their proper lines and encroach on the road, employ a surveyor to properly locate the road allowance.

Straighten from hill-top to hill-top.

By making the road and grade straight from hill-top to hill-top, irregularities of alignment are least noticeable.

Grading.

Grading neglected.

The grading or turnpiking of roads is a much neglected department of road construction. Any one without experience or training in road-making can haul gravel and dump it on a road. Any one can break up stone and spread it over the road surface with ordinary results. The spreading of gravel and stone on a road is commonly looked upon as the important phase of roadmaking; some appear to think it the only part of roadmaking that deserves consideration.

Roads are now cleared.

The common method of making a road in some townships is to merely haul the gravel or stone to the road and string it along in a more or less irregular line. It frequently follows the windings of an old earth roadway thrown up by statute labour years ago, before the country was wholly cleared. It was consequently bent and twisted along the road allowance to avoid streams, logs and other obstacles. The cutting of hills and the filling of depressions was only partially undertaken. To call the spreading of stone in this way "road construction," is a very unfortunate meaning to attach to the work.

Requires judgment and experience.

The grading of a road requires careful and discriminating judgment, based on experience. The grading of a road means that it will

be turnpiked; that the alignment of this turnpike will be straight and in the centre of the road allowance; that hills will be cut down and hollows filled up with the excavated earth; that the drains will be deepened or cleaned, or carried to a free outlet as circumstances may require; that the camber or crown of the road will be carefully considered; that the shoulders will not drop off in straight lines, but will be given a full curve; that earth will be brought to the edge of the stone so as to give the roadway a full and complete surface.

Grading requires skill.

The placing of stone or gravel on roads, as commonly done, requires little judgment. Grading, on the other hand, means that the man in charge will use intelligence, coupled with painstaking effort to get the work right. The grading of a road is the cheapest part of the work as a rule, for the expense in most localities will arise through the treatment and hauling of gravel or stone. The cost of grading is low, but it is the crucial point in the building of a road.

Grading is cheap but essential.

Thorough grading and turnpiking is the basis of permanent road-work. Good grading implies at least good surface drainage. Grading is the cheapest part of roadmaking, yet it very often is badly done or neglected altogether.

An even earth grade.

A well crowned and firmly consolidated earth sub-grade, in making a gravel or broken stone road, is of the greatest value, particularly in a stiff clay or other non-porous soil. When an earth grade is rough and uneven, the water, after a rain, can be seen lying in the hollows. When a porous covering of gravel or stone is laid over such a sub-grade, the water finds its way to these hollows as before, although it may become invisible because of the covering of stone.

Effect of uneven sub-grade.

The result of an uneven clay sub-grade in wet weather, particularly of spring and fall, is that the stone settles or is forced by wheels into the wet, soft depressions; ruts and holes quickly appear, and the road surface becomes rough and perhaps impassable, in spite of the covering of stone, which in such places, is broken through.

Roll and drain the sub-grade.

To roll the earth sub-grade is always advisable, as the water passing through the gravel or stone is more readily drained out of the road-bed if the earth is well crowned, smooth and compact. Drainage is the important principle of roadmaking. But the important principle of drainage is to remove the water which you cannot see, as well as the water which is in plain sight.

Always grade before gravelling or stoning.

Gravel and broken stone are largely wasted when the roads are not graded and crowned before the metal is placed on them. Before gravel or broken stone is put on the road, a good earth road should first be made by using a grading machine. The water-tables should be given regular slopes to natural outlets crossing the road.

Complete the earthwork.

Turnpike the roadway, cut down the knolls, fill the hollows, conform the slopes so as to drain to natural watercourses, crown the road with a good fall from centre to side. When this is done, gravelling and stoning will be a matter of permanent benefit.

Grade to flow of water.

Grade so that the longitudinal slopes conform to the natural flow of the surface water. Study the outlets for drainage, and grade to them.

Leave no depressions.

Depressions should not be left either on the roadway or in the open drains, in which water will stand. Drains from which the water does

not flow away are merely elongated ponds to hold water, permitting it to soak into and soften the roadbed. They make mud underneath the road, where it does more harm than on the surface; the dry crust is easily cut through. See that the road is so graded that there is a constant fall along all open drains or water-tables to natural outlets.

Shoulders of old gravel and stone roads.

Old roads with a good bed of gravel or stone, are usually too wide and too flat in the centre, with square shoulders at the sides. These shoulders are of soft material, earth, dust, sod, which should be cut off and turned outward, never brought to the centre to cover the hardened roadbed. If the roadway is too wide, as many old roads are, the grading machine will do all the work, carrying the shoulders outward and shaping the water-tables. When this is done, if the roadbed is sufficiently high, it should be restored to shape and crowned by a new covering of metal. If not high enough, it should be plowed or picked up, then graded with the machine and new material spread on top to the desired depth.

Grading Machines.

Grading machines are economical.

Grading machines are essential to economical earth-work. They are labor-saving implements. They are not intended so much to reduce the total expenditure on roads, as to permit more and better work to be done with the present expenditure. Their use hastens the era of good roads. The average cost is $225, and no outlay will afford better returns.

Value depends on skill of operator.

The value of a grader depends largely on the skill and good judgment used in operation. Experience and a knowledge of roadmaking are necessary on the part of the operator.

Employ a permanent operator.

Employ a capable operator. The operator should be active and energetic, with some mechanical experience; one who will take an interest in his work, who will make a study of road-making, and who will follow the instructions given him by the township road superintendent having supervision of the work.

Experience valuable.

The operator should, if doing good work, be engaged not only for the season, but from year to year, as his growing experience will render him more efficient. The training of men and giving them experience is always expensive and a municipality should not do this more than is necessary. To throw away experience is to throw away money.

Moving earth unnecessarily.

The expert operator knows how a road should be shaped. He knows just what earth to move in order to get the proper width and crown, with the right depth of ditch. Solid earth is not unnecessarily loosened and moved several times back and forth on the road.

Teams used by expert operator.

In the matter of teams alone, apart from quality of work, an expert operator can more than make up the amount of his wages. He will do more work with two teams of horses than an inferior operator will do with three or four teams. Not only will he do more work, but he will do better work. An expert grading-machine operator, as a rule, has little use for more than two teams as he knows just what earth to move and where to put it.

Use trained horses.

The same horses should be used in operating the grader for an entire season at least. "Green" horses are very awkward, will not pull together, waste much time, and even a reliable man as operator cannot,

under such circumstances, do good work. Horses used continuously become accustomed to the work, to each other, to the driver, and will produce much better results. Three teams and more if necessary should be employed in order that the work may proceed without delay.

Plan season's work in advance.

Plan the season's work in advance so that the different pieces of work can be taken up in regular order, with the least possible loss of time in moving the grader from place to place. In some townships it is customary for the grading machines to be taken here and there over the township without method—one day on one side of the township, next day on the opposite side, then to another distant part, backward and forward, wasting a considerable part of the wages of men and teams in moving from one part of the township to another. By following a well-considered schedule the cost of moving the machine between the different pieces of work is reduced to a minimum.

Commence grading early and complete before dry weather.

The township road superintendent, councillors or a committee of council (according to the local system of road management) should go over the roads early in the year and determine what grading is to be undertaken, and a proper schedule can then be prepared. The grader, when it commences in the spring, can then go to each piece of work consecutively. It should be in use continuously until all the grading is done for that year.

Do not cover gravel and stone with mud.

Do not use the grading machine to cover an old gravel and stone roadbed with earth and sod from the shoulders, in the belief that you are crowning the road. Use the grader to scrape mud and dust off gravel and stone—but never to cover the metal with a layer of soft stuff.

Use grader while ground is moist.

Have the grader in use in the spring as soon as the ground is sufficiently dry. The soil is then in its best condition for manipulation, having been mellowed by frost; the roads are rough and most in need of treatment. Roads which are properly graded early in the spring are at once compacted by traffic, and will remain in their best condition all summer. If the work is left until late in the season, clay soils become baked and hardened, difficult to handle, and rough when finished. Sandy soils if loosened up late in the year will be much more dusty than if treated early in the spring, when they are damp and readily compacted by traffic. Some grading can be done in the fall.

Make a special appropriation for grading.

A special appropriation should be made by municipal councils for the payment of a grading crew, so that the work can be carried on without interruption, and without depending on statute labor in any degree.

Traction engine used.

A traction engine is used for certain work by some townships. Where one can be rented from a local thresher, it can usually be obtained very cheaply in the early part of the year. Where a considerable stretch has to be graded without turning, as in cutting off the shoulders of old gravel roads, a traction engine is much preferable to horses. It is more steady and does not stop to rest.

Do not pass grader around among pathmasters.

Grading machines are sometimes passed around among pathmasters to be operated in the performance of statute labor. This is permitted by councillors who, on their own farms, will not allow a "greenhorn" to plow a furrow, put on a load of hay, or drive a team of horses. A grading machine is not possessed of brains any more than is a plow or a hay fork. Unless the operator is skilful, and unless the grading is done in the right way, and at the right time, the grading machine will not give satisfaction.

Can use grader to fill wheel tracks in new gravel or stone.

Where gravel or broken stone is newly spread on the road, wheel-tracks very quickly form, some of the metal being forced down and consolidated, the remainder being crowded outward. If this metal is not drawn back to fill the wheel-tracks, ruts are likely to form; whereas if these tracks are filled from time to time until the road is thoroughly consolidated they become almost as firm and hard as two lines of steel. An important use of the grader is to pass it up one side of the road and down the other, drawing the loose gravel or stone back into the wheel-tracks. By this means a very much more serviceable and durable road is produced. A grader does this work cheaply; or, preferably, a man may be sent over the road with a rake from time to time until the wheel-tracks are filled and well consolidated.

The Rock Crusher.

When essential.

Rock crushers with screen attachments are used for breaking quarry stone, field stone, and for treating gravel. They are being largely purchased throughout the Province. Under suitable local conditions they are an essential part of a road-making plant. They are subject to severe strain, and in selecting one of these machines, municipal councils should seek strength and economy of operation rather than a low first cost. Portable crushers such as are rated at 100 cubic yards in ten hours are more economical than small sizes, as the cost of operation is nearly the same in either case.

Gravel and stone compared.

Crushed quarry or field stone of reasonable quality is much more durable than is common gravel. The comparative life of stone and gravel roads depends on the amount of traffic. Gravel may give good service under light travel. But the heavier the travel, the more favorable becomes the use of broken stone, which is more durable and does not wear and rut so readily as does gravel. It is ordinarily assumed that one load of crushed stone is equal to two loads of gravel.

Crushed gravel.

Crushed and screened gravel very often does not cost any more, on the road, than does gravel in its natural state. This arises in two ways from reduced cost of teaming and loading:

(1) Coarse or loamy or sandy pits near the work may furnish a supply of gravel suitable for crushing or screening, but not fit for use in its natural state, and in this way the shorter haul and reduced cost of teaming offsets the cost of crushing.

(2) By elevating the crushed gravel to a bin, wagons may be loaded in three minutes, instead of in a quarter of an hour or twenty minutes, so that teams are not paid for standing in the pit.

Bins for loading.

Bins should always be used to receive stone from the crusher. Unless this is done, the crusher must frequently be stopped, keeping the entire equipment of men and machinery idle, while waiting for empty wagons. For the same reason, if field stone is used, it should be piled in advance of crushing, so that the outfit will not be idle while waiting for loads of stone to come up. By piling stone in the winter when farmers are idle the cost is usually lessened.

Screens.

A rotary screen should be used on each crusher, elevating the crushed gravel or stone to the screen by means of chain buckets. The size of perforations in the screen will depend on the material being

A Peel County Concrete Arch, near Cooksville. The arch, with timber centering in place, is on Dundas Street, and has a rise of 17 feet and a span of 40 feet.

crushed. For ordinary quarry limestone or field stone when a roller is used, it is desirable to separate the material into three grades:

(1) Such as will pass a 1½-inch mesh.

(2) Material larger than 1½-inch and such as will pass a 3-inch mesh.

(3) Tailings.

Placing stone. The "tailings" or coarsest size passing the crusher should be put in the bottom of the road. The 3-inch material should be spread over the tailings. And the 1½-inch material can be used as a surface dressing. Care should be taken not to use too much of the surface dressing—merely enough to obtain consolidation with a roller.

Excess of dust to be wasted. For crushed gravel the screen should have a wire dust jacket wrapped around part of the 1½-inch section of the screen to remove sand, dust of loam, using a ⅜-inch mesh for this purpose. This fine material should be wasted. When spread on top of the stone to a depth of two or three inches as is sometimes done, the effect of screening is largely lost, as the fine stuff turns into slush in wet weather and ruts are commenced. There is usually plenty of sand and mud on the road without paying for hauling more. Clean stone, well consolidated by rolling, is what is needed on the roads.

Uses of crusher. Stone crushers are necessary wherever broken stone is to be used, and they have wholly superseded the old method of breaking by hand. They may be used for crushing quarry stone, field boulders, or stone from coarse gravel pits. When used in boulder pits, or in pits of very coarse gravel, by putting all the material, fine and coarse, through the crusher, then through a rotary screen, an excellent road metal is produced, free from dirt, and graded according to size.

Portable and stationary. Crushers may be either portable or stationary. Portable crushers are mounted on wheels, may be moved from place to place, and are generally used for crushing field stone. Stationary crushers are heavier, and are designed for permanent location in quarries.

Jaw or gyratory. Crushers may be either of the jaw type or the gyratory type. The latter are used only for stationary work.

Capacity. A crusher should have capacity for 100 cubic yards in ten hours. Small sizes are not, as a rule, satisfactory. Portable crushers, with a capacity of sixty yards in ten hours are commonly used, but the larger size, which will crush one hundred cubic yards in ten hours, is more economical, as the cost of operation is nearly the same in either case.

Selection of type. Where field stone is used, or where quarries are numerous throughout the township, a portable crusher is desirable; but if the crusher is to remain stationary, a portable crusher is at a disadvantage.

Engine required. For a crusher of the capacity suggested, an engine of about fifteen horse power is desirable, and this can usually be rented from the owner of a threshing machine for from $3 to $5 a day.

Output. The output of a crusher depends largely on the skill and method with which it is operated, the hardness of the stone, the size to which it crushed, and the ability of the man in charge.

Feeding the crusher. For economical work, see that there is no interruption in feeding. The maximum amount of stone should be fed; and compel the teams to get it away. The operator should work at night if necessary to keep

the crusher and plant in thorough repair, so that the entire outfit of men and teams will not be standing idle while repairs are being made during the day. In setting up the plant, see that it is so arranged that all work will be down-hill; make use of gravity, do not work against it. Build a platform over the crusher for a one-horse dump cart. Gravel can be dumped into a hopper and requires no further handling.

Field stone drawn in winter.

Field stone can generally be obtained and piled in winter more cheaply than in summer.

Pile on both sides of crusher.

If stone is stored for future crushing it should be put in piles on both sides of where the crusher is to be set up.

Feed from wagons.

Much can be saved by setting up a crusher so that it can be fed directly from the wagons instead of wheeling the stones in barrows. To permit of this, the crusher may be permanently set in an excavation on a hillside, wagons driving over the crusher; or a platform may be erected to the level of the crusher.

Cost of crushers.

The cost of crushers varies from time to time, and intending purchasers should communicate with the manufacturers, who can each give their figures. The cost of crusher and screen may be placed at about $1,000 or $1,200, but this is merely an approximation.

Cost of crushing.

The cost of crushing varies with many circumstances—often from day to day. The wages of men and cost of teams, the hardness of the stone, the size of the stone laid down at the crusher, the degree of fineness to which it is to be broken, the facilities for setting up and feeding, are among the factors which affect the cost. With stone piled at the crusher, and with an engineer, a foreman, two men feeding the crusher, a team hauling to the crusher, two men loading wagons, a man at the bin, and an extra team, an average cost would be 40 cents a cubic yard at the crusher.

Road Rolling.

Rolling is essential.

Rolling is essential to the construction of a good stone road. It is impossible to build a stone road cheaply and durably without a roller, and the same is true with regard to the best class of gravel roads.

Loose stone objectionable.

Roads built of loose stone take from one to three years of traffic to consolidate. During that time such roads are a serious obstruction to traffic. On short patches this is not so noticeable; but on long stretches of one or two miles, it is distinctly objectionable and much dissatisfaction arises. Before traffic can, with comfort, use the metalled roadway, the earth sides are cut up, drainage is blocked, and the entire roadway is frequently rutted or worn out of shape by vehicles travelling along one side of the stone.

Select the best.

Councils in selecting a steam roller should choose the best; and respective merits should be carefully studied. A saving in first cost may be many times offset by the additional cost of operating or maintaining an inferior machine. Maximum results and fewest stops for repair are all-important in seeking true economy.

Economy of rolling.

Rolling is not an added expense to the cost of a stone road. The cost of rolling is more than made up by the saving that results in several ways.

Coarser stone.

Coarser stone can be used in a road that is rolled so that the cost of crushing is reduced. Between stone crushed fine enough to be used

without rolling, and the coarser stone suitable for a rolled road, there may readily be a difference in cost of from eight to ten cents a ton. This alone will nearly pay the cost of rolling limestone.

Less repairs. Roads built without rolling demand a great deal of attention for several years that is not given to rolled roads. The stone has to be raked to place from time to time; the earth sides have to be levelled where they have been cut up and destroyed; new material has to be added to fill hollows and ruts.

More durable. Rolled roads are more durable, and in consequence the cost of repair and maintenance is greatly reduced. With coarser stone in the roadbed it is stronger to resist wear; and it is more securely bonded than where it is first rutted and mixed with mud.

Reinforced Concrete Beam Bridge over the Credit near Orangeville. Clear Span, 22 feet; Length over all, 34 feet; Clear Width of Roadway, 20 feet; Height of Walls, 13 feet 6 inches. Walls, Floor, and Girders are Concrete, Reinforced with Steel Rods. Cost —Concrete, $448.00; Steel Reinforcing, $85.00.

Less stone. Less stone is required on a rolled road, as loose stone is largely forced down into the mud or is knocked to the ditches by traffic.

Uniformity. A good road should have a foundation of uniform strength, surfaced with a well-bonded coat of stone of uniform thickness. By rolling the sub-grade, weak spots are developed which can be filled with earth and again rolled to produce a uniform foundation. Earth for this purpose is cheaper than stone. When weak spots are brought to grade in this way, an even coat of stone can be applied and rolled to its permanent place. Only a roller will do this work.

A complete work. In addition to less cost, a stone road built with a steam roller is a complete work. It is in the best of condition to drive on as soon as rolling is finished. Rolled roads are a delight to those who have been accustomed only to old-time methods, and have done much to popularize county road systems.

Finish the work. A roller finishes a road. Ratepayers see only the surface of the road, and however well it may have been otherwise built, if the metal

is left loosely on the surface for vehicles to consolidate, the public are inclined to be dissatisfied. By means of a roller newly made roads are at once placed in their best condition for use, and vehicles are not compelled to drive in the edge of the ditches for a season to avoid a mound of loose material in the centre of the road.

Rolling is essential to good work.

The road roller is one of the most important of road-making implements. Its use tends to greater durability, and consequent economy of maintenance. The cost of a road is largely dependent upon the amount of stone and gravel required; and by the use of a roller, the strength of the surface coating can be much increased, the drainage made more perfect, the life of the road lengthened, and in a given period, a much less quantity of stone is required on the road.

Roll the sub-soil then the metal.

A road should first be properly graded, crowned and drained. The roller should then be used to consolidate this earth sub-soil so that the gravel or stone placed on it will not be forced down into loose earth, but will form a distinct coating. When this foundation is prepared, the metal can be placed over it and rolled and consolidated into distinct crust.

The metal must form a crust.

It is one of the cardinal principles of roadmaking that the metal must form a distinct crust over the natural earth. This is not possible if the broken stone is dropped on a loose mound of earth, and is left for traffic to consolidate. To this end,—

(*a*) Roll the earth subsoil before putting on the broken stone or gravel.

(*b*) Roll the broken stone or gravel until it is thoroughly solid.

Municipalities which do not roll the earth sub-grade do not get the full benefit of the roller.

Further benefits of rolling.

In addition to forming the stone into a distinct crust, bonding the stone, and making a more water-proof covering, the sides of a rolled road are not rutted and flattened in such a way as to prevent good surface drainage.

Traffic consolidates metal, but wastes it, mixing with earth.

The consolidation of loosely spread stone or gravel by traffic is a slow process, causing much inconvenience to travel, during which the earth or sub-soil becomes mixed with the stone. Earth intermixed with stone prevents the strong mechanical bond which clean metal will assume when the stones are wedged one against the other by a roller. The particles of earth, when wet, have a lubricating influence on the stone, and under the action of wheels, the surface is more readily broken up.

Roll metal wet.

The roller should be preceded by a watering cart, and the material kept thoroughly wet. Otherwise, rolling should be done in wet weather.

Work of roller

The amount of rolling which can be done in a day varies according to the quality of the metal used, the kind and amount of binder, the thickness of the layer of stone rolled, the weight and type of roller, the amount of water used in sprinkling the road, the gradient of the road, and the steam pressure. Less rolling is required to solidify the stone, if the earth sub-grade has been well rolled. With broken limestone, rolled by a twelve-ton steam roller, the amount of stone compacted will average between forty and fifty cubic yards in a day of ten hours.

The steepest grade.

The steepest grade on which a steam roller can be used is 1 in 6. A grade of 1 in 14 gives little trouble either up or down.

Depth of stone to roll.

A depth of 4 or 5 inches of stone is better than either greater or less. But to avoid the expense of rolling in two layers, a depth of 6 or 7 inches may be rolled.

Voids in stone

In loose stones the voids are about 48%. In dry rolled stone, the voids are reduced to about 40%, and in wet rolled stone to about 33%. The screenings should partially fill these voids.

Commence at sides.

Rolling should commence at the side of the road approaching the centre gradually. If the roller is first passed over the centre the loose material is crowded out and the road flattened. The rolling should be continued until the road is thoroughly compact and solid, able to resist, without displacement, the heaviest load passing over it.

Horse rollers.

A horse roller, weighing six or eight tons will do if a steam roller cannot be afforded, but the horse roller is not sufficiently heavy for the best results. It has to be used longer than the steam roller. The feet of the horses, in exerting sufficient strength to move the roller, sink into and disturb the road metal and injure the shape and quality of the roadway, while on hills it is at a disadvantage.

Steam rollers.

Steam rollers are of various weights, ranging from eight to twenty tons. Rollers of ten or fifteen tons weight are those generally used by municipalities of Ontario. The cost of horse rollers is usually about $90 per ton, or from $400 to $600 each. Horse rollers are generally so constructed that the weight may be increased by iron castings, so that a roller of five tons may be made to weigh about eight tons. Steam rollers cost about $3,000. For operation, a horse roller, with two teams, will cost $7 per day. A steam roller will cost $10 a day, including interest and depreciation, but will do several times the amount of work done by a horse roller, so that the saving in operation is considerable.

Side Slopes of Cuts and Fills.

Stability of slopes depends on drainage.

The stability of earth slopes in cuttings and embankments is subject to atmospheric action, especially alternate frost and thaw, and depends largely on drainage. Clay retains water and becomes pasty. Sand, if in a basin of water-holding earth, becomes a quicksand and is completely unstable. A mixture of sand and clay is at times the most difficult case to deal with. Side slopes are generally left too steep.

"Angle of Repose."

There is a certain "angle of repose" at which the tendency of earth to slip is overcome. This angle varies with different kinds of earth, under various conditions of moisture. Wet clay is troublesome, and an angle of sixteen degrees is sometimes needed to secure it. Well drained clay, however, will rest at an angle of forty-five degrees, or a slope of one to one. With average gravel and compact earth, a slope of one to one is a safe angle, although first-class gravel will retain an almost vertical face for a considerable time. Sand varies greatly, "water sand" being no better than wet clay. Dry sand needs a slope of one and one-half to one. Rules of this description cannot be laid down with complete accuracy, and it is advisable to learn by observation what slope is needed for a particular piece of earthwork.

Natural form of slope.

The natural form of an earth slope when in permanent repose is a concave curve, with the flattest portion near the bottom. There is a tendency to leave the slope rather in the opposite form, with an outward

A Wentworth County road, between Hamilton and Pt. Nelson.

curve. Convex, or straight slopes will invariably slip until the natural form is obtained. In cuttings and embankments approaching ten feet in height, care given to proper construction in this regard is always profitable.

Dry stone wall at foot of slope.

A dry stone wall at the foot of an embankment or cutting will protect the drain from slipping earth. A coating of sod is one of the best protectors of the slope, for which there should be a few inches of vegetable mould over the surface, and a liberal sowing of grass seed.

Drain back of hill.

If a wet condition causes the earth to slip, a surface or under-drain back of the hill may be necessary.

Hills.

Complete each hill in one operation.

Hills require special care for construction and maintenance. They must always be counted upon as a matter of extra expense. It is usually a mistake to do a little grading and scraping on a hill every year. Instead, each hill should be taken up and finished as one work. This includes the making of a permanent grade for the roadway and bringing the side slopes of cuts and fills to such an angle that they will not slip and wash out every spring.

Reduce steepest hills to average.

On very hilly roads, the slope of the steepest hill should be reduced as far as practicable to the grade of the average hill. One steep hill may reduce the size of load that can be drawn over the road by one-half. If possible, hills should not exceed a rise of eight feet in 100, or about one in twelve.

Crown road sharply on hills.

Hill roads should be more sharply crowned than on level ground. The crown should be sharper than the slope of the hill, otherwise the water will follow the wheel tracks, instead of being turned to the side ditches.

Do not carry water long distance to hill.

Dispose of as much water as possible in natural water courses back of the hills. If practicable, allow no water to pass over the hill, except that which naturally falls on the surface of the slope.

Above practice causes washouts.

The practice of carrying water long distances in open drains, and finally pouring it over the hills, on the road allowance, is very objectionable and costly, causing bad washouts during spring freshets especially.

Crown road sharply back of hill.

The road should not only be crowned sharply on the hill, but also back of the hill. A flat condition at the top of the hill leads water into the wheel tracks in such a way as to make deep channels in a short time.

Crown sharply at foot of hill.

Crown the roads sharply at the base, and between hills, otherwise water following the wheel tracks will lie in pools on the road.

Under-drain wet hills.

When hills are very wet in the spring, and the mud very deep, the only cure is under-drainage. Lay tile up the side of the road, with laterals leading into the heart of the springs. If the soil is a stiff clay, cover the tile with gravel, cinders, or other porous material. On hills do not lay the tile under the open drains, as they are liable to be washed out, but place them inside the shoulders.

Under-drain roads on side hills.

Where roads, passing along the sides of hills, are softened and kept wet by soakage from the high lands, lay tile along the upper side of the road to intercept the soakage.

General treatment of hills.

Summarizing, give most careful attention to the drainage of hills. Finish the earthwork as one work, bring the road to a permanent grade,

giving the sides of cuts and fills a slope that will last. Crown the road sharply, not overlooking the top and bottom. Use tile to underdrain springy places or soakage from high lands. Do not carry any more water over the hill than is absolutely necessary.

Swamp Roads.

Swamp roads bad because wet.

Roads through swamps are difficult to make and maintain because of water under the road—a lack of drainage—and because the soil is usually a vegetable mould, which becomes soft and yielding when wet. Water soaking under the road is drawn up into the entire grade, keeping the roads in a constantly soft, damp and yielding condition. It ruts readily, the coating of metal placed on the road is cut through, and a complete breaking up of the road then results.

Drainage the cure.

Every opportunity should be taken to carry the water away. If this can be perfectly done, it will cease to be a swampy road, in spite of any difference in the quality of the soil. It is too often expected that by throwing up a sufficiently high grade, and piling on a great quantity of gravel, a permanent road must result. This will succeed only where the soil is of a firm quality.

Corduroy.

When sufficient drainage cannot be had, lay a corduroy foundation, on this place a covering of earth, and a surface coat of gravel or broken stone. Rather than use the black vegetable mould, which becomes mucky when wet, cover the corduroy with clay loam, a gravelly loam, sand or clay. Sand, when slightly moist, makes a good foundation. If the road passes over extremely boggy ground, a bottom can be made by throwing in a thick matting of shrubs and branches, on which to place the covering of earth, then gravel or stone.

Dump Wagons for Gravel and Stone.

Wagons for gravel or stone.

Wagons are now built specially for gravel and broken stone. These have a hopper-shaped opening between the front and rear axles for distributing the metal over the road. The opening of the hopper is controlled by a lever beside the driver. The metal can be distributed to any required depth, after a little experience, by regulating the extent to which the hopper is opened. For screenings especially, in distributing them evenly over the stone, these wagons are particularly useful.

A wagon train.

A number of these wagons, coupled together, and drawn by a traction engine, affords one of the cheapest methods of hauling gravel or stone for a considerable distance, under certain conditions. Each wagon holds ordinarily 1½ cubic yards of metal.

The Scarifier.

The road scarifier is a machine almost unknown in Ontario, but is an extremely useful one for roadmaking purposes.

Breaking up old roads.

The machine costs about $475, and is used in breaking up the surface of old stone roadbeds, in order that the roadbed may be properly shaped before putting on new material. It is of special use in a locality where crushed stone has been largely used for years. By means of the scarifier, the grading of these old roads can be more cheaply and effectively done. When properly shaped, there is a considerable saving of new material.

as less new crushed stone is required to crown the road and fill up inequalities. This work is at times done with a road grader, but is a severe strain on that machine and usually results in considerable outlay for repairs. Counties and townships having the treatment of old gravel and stone roadbeds to consider should study the results obtained by the use of a scarifier.

The Log Drag.

Use on earth roads.

When earth roads have been graded (but not metalled with gravel or stone) keep them in repair with a log drag.

How to make a drag.

Split-log drags are very easily and cheaply made. A log from five to seven feet long is split or sawn in half. The halves are placed parallel to one another, the edges down and flat face to the front. They are firmly braced together in this position with three cross-bars wedged into 2-inch holes bored through the log. A chain-hitch is attached in such a manner as to incline the drag at the desired angle, say forty-five degrees, the forward corner being at the outer edge of the road, and the rear corner at the centre.

Effect of dragging.

By dragging this implement up one side of the road and down the other, making a number of circuits, using two or three horses, the edges of the log plane off the tops of ridges and rough places, drawing the material sideways and forward to fill hollows, and ruts, crowning it at the centre of the road. This drag, used eight or ten times during the year on an earth road, while the earth is in a moist condition after a rain, will keep an earth road in the best condition that an earth road can be made to reach.

Systematic dragging.

Councils should establish a plan of dragging the earth roads systematically. It will not be done properly when left to statute labor or to individual effort. Sections should be let by tender, one or two miles in length, and the work inspected by the road superintendent. Counties having a system of county roads should follow the same plan on earth roads until their permanent construction has been reached.

Use a light drag.

Use a light drag—perferably of cedar, pine or basswood, such as can be readily managed by one team of horses, and use it often. Fasten strips of steel along the lower face edges of the drag from 2 inches to 4 inches wide, and 3/8-inch thick. A straightened wagon wheel, or sleigh runner, is ordinarily used.

Make ends of drag parallel with road.

Instead of making the drag with square ends, give the rear slab a set-back, so that, when the chain is hitched at the ordinary angle, the ends of the drag will be parallel with the sides of the road.

Use the drag early in Spring.

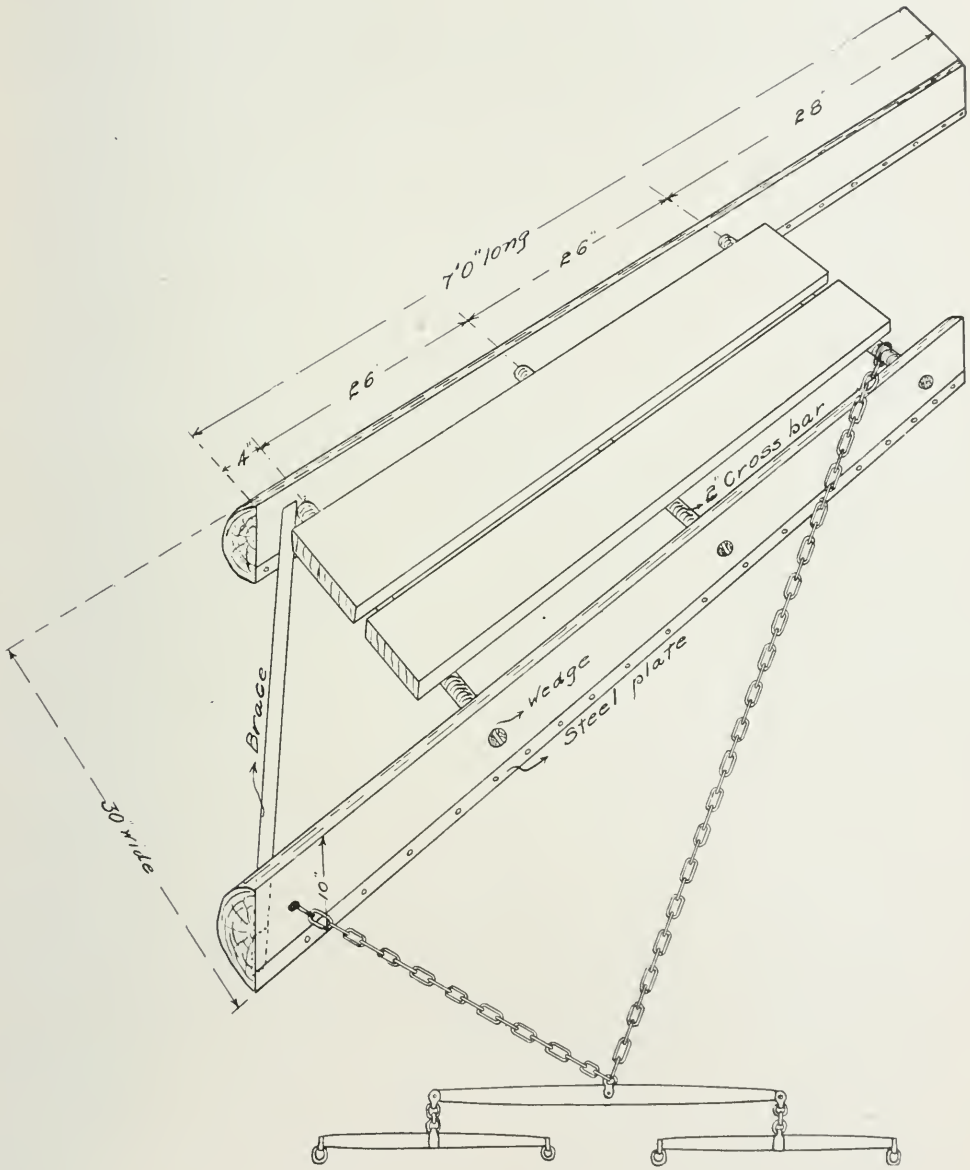
Use the drag as early in the spring as possible, and as frequently thereafter as is needed to keep the road smooth and free from wheel tracks.

When to use after rain.

Use the drag when the road is very wet and slushy, either when raining or immediately after: or use the drag when the road has become somewhat dry, and the soil loose and friable. There is an intermediate stage in which the earth is sticky and rolls up in lumps, instead of spreading out smoothly.

Puddled clay.

If a clay road is dragged in the wet stage, a tough rubber-like surface is produced; but the road is very apt to be cut up by traffic before it becomes dry.



A LOG DRAG.

Showing details of construction. Holes for the cross-bars are bored before the log is split.

Drag often. Use the drag so frequently that the road is never really out of repair, and draw only a little earth to the centre at each operation. If the road is dragged only when very rough and flat, so that a great ridge of earth is piled at the centre, the best results are not reached.

Round the road. Give the road a round contour—not two flat planes meeting at a sharp angle in the centre of the road. In doing this a short, light drag is most serviceable.

Attaching chain. Attach the end of the chain at the outer side of the drag to the cross-bar; and the end at the centre, to a ring in front, or pass through a hole in the front of the drag. If both ends of the chain are fastened to the cross-bars, there is a downward bearing on the front of the drag liable to upset it in a manner dangerous to the operator.

Length of chain. Length of chain changes the line of draft in such a way as to regulate the hold taken on the earth. To lengthen the chain is equivalent to putting a weight on the drag. If the drag is too heavy shorten the chain. To move more earth, lengthen the chain.

Cross bars near top. The cross bars should be nearer the top than the bottom, to allow the earth to pass underneath them

Reversing of drag. In certain sticky conditions of the road the drag can be reversed, drawing the round face forward.

Stand on the drag. Place a couple of planks over the cross-bars for the operator to stand on. The operator can then regulate the work of the drag by moving from one end to the other.

Trim edges, remove boulders. The operator should have a shovel with him to trim the drains and edges of the road: or a crow-bar to pry out boulders, logs and stones. He can use these when the horses are resting.

Straighten the road. To straighten the road, or deepen the drains, or cut down high shoulders, plow the sides, and cut up the loosened earth with a disk harrow. It can then be drawn in gradually with the drag. Turn over only one or two furrows at a time, and drag in a little at each operation.

Filling holes. If the drag becomes clogged with mud, weeds or sod, stand as far as possible from the ditch end. To fill a low spot or mud hole, step quickly from the ditch-end of the drag to the end at the centre of the road.

Grading. By means of the drag, together with the plow and harrow, much can be done to grade a new road, particularly if the land is moderately level and the soil not a heavy clay. But this work is apt to be extravagant of labour, and should be done with a grading machine.

Handles. Handles on the drag are a decided advantage.

Drag before freeze-up. Watch for the last freeze-up in the fall, and drag the road just before it, so as to get a smooth base for the snow road. Very little snow will then make good sleighing.

Study the soil. The nature of the soil, varying from a stiff clay to a light sand, influences the use of the drag. Study the results produced by the drag under all conditions of soil, season, and material.

Experience is needed. Skill born of careful observation and practice is needed. Do not expect the best results at first.

Maintenance and Repair.

Maintenance important. Maintenance is as important as construction. Roads deteriorate very rapidly if neglected. Rain, frost, freshet, drought, wagon traffic, the steel shod feet of horses, narrow tires, and automobiles, combine powerful forces to flatten, rut and destroy roads.

A Concrete Arch in Dufferin County.

Repair continuously.

Roads should be maintained by not allowing them to get out of repair. Neglect to keep roads in repair, failure to repair them when repair is first needed, adds very much to the cost of roads. A good road which is not kept in repair, very quickly becomes a bad road, and the object of the original expenditure is thus lost. To allow roads to degenerate for want of repair, means an immense waste of labor, material and money, which has to be made up in their reconstruction. Wherever good roads are built, arrangements should be made for a careful attention to their repair.

Railway system of sections applicable.

Public highways should be kept in repair by a system similar to that adopted by railways. Where a council, as is commonly the case, provides materials, gravel, tile, etc., for road maintenance, out of the general funds, one section-man with horse and cart, and help when required, can keep in repair five miles of gravel or stone road, at a cost not exceeding the statute labor along the road, commuted at one dollar a day.

Repair first year after construction.

A road as commonly built for country traffic should receive as much attention the first year after construction as it would require in the following two years. This is especially necessary if gravel or stone is placed loosely on the road and left for traffic to consolidate.

Good construction reduces cost of maintenance.

A large part of the repair of roads is necessitated by defective construction. A poorly-made road will wear out much more rapidly than one which has been well built. To construct roads properly may be greater in first cost, but this is compensated by the reduction in the outlay for maintenance in addition to the benefits of better roads.

Keep roads smooth.

Roads should be kept smooth. Smooth roads shed water more readily than do rough roads. It is not the even roll of a wheel over a smooth road that causes injury. It is the jarring action of wheels dropping from loose stones, from protruding stones, or sinking into holes and ruts.

Make the first wagon track.

When a road is newly built, drive a wagon up and down a number of times, and make a track where vehicles are wanted to go. This is especially necessary if the gravel or stone is not rolled or if there is a tendency to drive on the earth shoulders. Teams are very like sheep—they follow the leader.

Ends of culverts and bridges.

Hollows and pitch-holes should not be allowed to form at the ends of culverts and bridges projecting above the surface of the road. These pitch-holes form because every vehicle crossing the bridge drops down with a heavy jolt. Shallow at first, the deeper the holes become the more rapidly they increase in size and depth, because the pounding action of the wheels increases with the depth. Water collects and remains in these holes, and assists the wearing action of the wheels.

Pounding action on rough roads.

Wherever there is a roughness of any kind, a projecting or loose stone, a soft or hollow spot in the road, there is the same pounding action of the wheels assisted by the collecting of pools of water, which lie in every depression.

Snow drifts the cause of severe wear.

In the spring of the year, on roads which have been drifted, and on which the snow lies unevenly, the shallow places melt first, leaving the gravel or stone road exposed in spots, with mounds of snow on each side. Here the pounding action goes on. Wheels drop into depressions kept soft by the melting snow. Pitch-holes commence, and a few days of traffic break up the road and do a great amount of injury.

Wheel tracks very soon form after a road is first metalled with gravel or broken stone, particularly if not thoroughly consolidated with a roller. In forming these tracks, a certain amount of the metal is forced downward by the wheels, but a greater portion is crowded outward. In this way, when wheel tracks are not filled, they become the weakest part of the road; whereas the portion of the road supporting the wheels should have the greatest strength. These tracks or ruts should not be allowed to remain in the road. But, when they have formed, they should be filled by drawing metal into them again with a grading machine or by the use of a rake. By giving constant attention to these tracks until the road is thoroughly consolidated, keeping the road in proper shape, and the road metal in place, the wheel tracks become what they should be, the strongest part of the road, almost as firm as two lines of solid stone. When once a well-shaped road has been given a proper form, and is thoroughly consolidated in this way, the subsequent cost of maintenance is greatly reduced.

Wheel tracks in new metal.

Shoulders and edges of turf between the metal and the ditch should be cut off from time to time, taking care not to draw this sod and earth to the centre of the metalled road, as some townships have done when using a grading machine. These shoulders are made up of dust washed from the centre of the road, and they interfere with the ready flow of water from the wheel-tracks to the side drains. This material, if returned to the top of a hard covering of gravel or stone, will destroy the road. It should be either thrown across the drains to the side of the road and levelled off, or gathered up in wagons and used to fill a low grade on an earth road, or wherever it can be used to advantage.

Remove square shoulders at sides of road.

Whatever material is used in the construction of a road should be used in its repair. Holes and depressions on a clay road should be filled with clay; on a gravel road they should be filled with gravel, and on a stone road they should be filled with broken stone. If a soft material is used on a hard road, the hole will quickly reappear. If a harder material is used than the road is made of, two holes will be made instead of one.

Use same material for repair as for construction.

If a pitch-hole in a clay road is filled with stones or gravel, holes will be made by traffic on each side of the hard material. If broken stone is used to repair depressions and holes on a gravel road, a hole will be cut through on each side of the patch of broken stone, where wheels of wagons drop on the softer gravel.

Effect of hard material on softer roads.

Do not allow hollows, ruts or puddles to remain on the road, but fill them at once; if an earth road, use earth; if a gravel road, use gravel; if a stone road, use stone.

Fill hollows, ruts, etc., at once.

Deep holes in gravel and stone roads should have the earth and soft material cleaned out of them before putting in new metal.

Clean soft material from deep holes.

Ruts and holes should be filled a little higher than the surface of the road so that there will not be a depression when the material is consolidated.

Fill above road surface.

Keep weeds and sod cut away from the shoulders of gravel and stone roads by the occasional use of the grading machine.

Keep weeds and sod off shoulders.

Loose stones should be raked into piles, to be taken up by a wagon and hauled away. The stones should be collected in a convenient place

Loose stones on road.

to be used afterward for crushing, putting into fills, or in such other manner as occasion may require.

Drain outlets in Spring.

All ditches and drains should flow freely in the early spring, so that the cold water may be drawn away as quickly as possible, permitting the frost to come out of the ground.

Effect of soft sub-soil.

If the ditches are not in condition to drain the macadam promptly, heavy loads will cut through the macadam into the wet and soft sub-soil, forming holes that are costly to repair.

Obstructed culverts.

The ends of culverts should be watched to see that they are not obstructed by leaves, grass and other material. Snow and ice should be removed from culverts whenever there is an accumulation likely to cause obstruction in case of a thaw. Special care should be taken in this respect prior to the time of spring freshets.

Water in wheel tracks.

Water should never be allowed to stand or flow in the wheel tracks, especially on steep grades, care being taken to preserve the crown so that the water will flow to the side ditches.

Rubbish dumped on roads.

Waste material from adjoining farms should not be allowed on the road. The roadside should not be used as a dumping ground for stone or other rubbish. Noxious weeds and brush should be cut and removed.

Size of stone for repair.

For repairing the surface of a stone road use stones that will go through a two-inch gauge.

Use screenings.

Use chips or screenings as a binding material on stone roads. Earth, sod, dust and similar soft material will ruin the best road ever built.

Blanket of dust and mud.

Do not allow dust and mud to lie on the surface of a gravel or stone road. Dust becomes mud in wet weather, and mud keeps a road in a wet condition for weeks, whereas it would dry in a few hours if the blanket of mud were removed.

Use a rake freely.

The rake is a most useful tool for making repairs, and should be frequently used on gravel and stone roads to keep wheel tracks filled with the metal forced out of them. This is especially true during the first year after construction.

Split-log drag.

On earth roads, establish a system of regular treatment with the "split-log" drag.

Continuous, not periodic repair.

Roads should receive constant attention. This is the most economical and satisfactory system of making repairs. Repairs should be made, not once a year, nor twice, but as soon as signs of wear appear. Special attention is needed in early spring and early fall, as at these two periods much can be done to prepare the roads for the ensuing seasons of particularly severe conditions.

Snow Roads.

Prevent drifting.

Good snow roads should be provided, as far as practicable, by means to prevent drifting.

How drifts are caused.

Snow drifts occur in an open country, where the snow is swept from a large area, and deposited at sheltered points, or where the current of the wind is broken. Roads most subject to obstruction are those running in a northerly and southerly direction, this being at an angle with the direction of the prevailing winds, which are often from the west and north-west. While all roads are more or less liable to obstruction, those running east and west are not so frequently blocked by snow drifts.

Snow Cleaning Equipment in Ottawa, consisting of Snow-Plow, Grader, and Roller.

Two methods of preventing drifts.

There are two methods of preventing snow drifts on roads. One is to interpose an obstacle, neither through nor over which the wind can carry snow. This method is commonly adopted by railways at deep cuts where close board fences are built about eight feet in height. By this means, the snow is deposited, and the drift occurs, on the side of the fence away from the railway. Without such an obstruction the wind-swept snow would subside into the cut, where it would be sheltered from the wind. A similar purpose can be served by planting a close hedge of cedar, spruce or other suitable evergreen, parallel to the road. This is an effective means of preventing the roads from becoming blocked.

(1) A high close fence or a hedge.

(2) Use wire fences.

The other method of preventing drifts is to remove all obstacles, so that there is no hindrance to the sweeping snow. A rail or open board fence permits the snow to pass through and over it, but the force of the wind being checked by the fence, the snow subsides in the roadway. If instead of open rail and board fences, wire fences are used along the highways there is no obstruction to the wind, and the snow is swept along with little more occasion to drift than in the centre of an open field. Numerous townships pay a bonus for the construction of wire fences.

Snow plows.

Snow plows of considerable merit are manufactured, and can be used to advantage. The objection made to them is that the track, as cut out, very quickly drifts full of snow—yet the same is true of roads shovelled out by hand. Plows have the advantage that they do the work much more cheaply than can hand labor. Rollers have been used to press down the snow. Some townships use road graders placed on a sleigh, in opening snow roads. A disk harrow is useful in cutting down roads which have become too high through the filling of sleigh tracks.

ROAD SPECIFICATIONS.

A standard specification should not be understood as one to be followed rigidly under all circumstances. Properly treated, no two miles of road should be constructed in precisely the same way. For this reason every road should be a problem in itself, to be treated in accordance with local conditions and requirements, always, however, following the scientific principles underlying the making of good roads. A standard specification is one that may be drawn upon to meet average conditions, but in every case it should be varied to meet the special requirements of the work undertaken.

Owing to the great variation in requirements, particularly in the grading and drainage of a new road, it is exceedingly difficult to draw up a specification which will not be cumbersome, and which will not, because of intricacy and indefiniteness, cause contractors to be alarmed to such an extent that their prices will be considerably advanced. For this reason the great majority of municipal councils have been in the habit of building roads by day labor rather than by contract. In justice to the work, road specifications should be simple and definite, but the necessity of safe-guarding the municipality from "scamped" work makes an ideal difficult to reach.

As between work wholly performed by day labor, and the other extreme of contract work, there is a middle field of safety to the municipality. It is that all

earth work, including draining and grading should be done by day labor under the municipal road superintendent. For this work he could use the grading equipment which all municipalities possess, and could carry on the work at the most favorable seasons of the year. Having provided for grading and drainage, with incidental details, the placing of stone or other road metal could readily be let by contract.

The standard specifications in this report have been prepared with a view to the simple treatment of all classes of work performed under contract, but should be modified to meet special requirements. They express a standard required for county road systems, but in their application to municipal work should be accompanied by general conditions such as those attached to the specification for steel bridges.

STANDARD SPECIFICATION FOR STONE AND GRAVEL ROADWAYS.

Scope of specifications

1. The work covered by these specifications is to include the supplying of all labor, machinery plant or materials which are needed to construct durably and expeditiously and to fully complete ready for travel a roadway which is, in general, to be straight and in the centre of the road allowance, with a uniform width between the inside of open ditches. Roads are to be given an easy, flowing grade, cutting hills and knolls, and filling depressions. The steepness of hills is in no case to exceed a rise of four per cent. On roads not previously metalled, earth excavated from the ditches is to be drawn to the centre to form the grade or turnpike. On old stone or gravel roads, earth shoulders are in general to be turned away from the centre, across the open ditches if so directed and the crown of the road restored by placing new metal on the old stone or gravel base.

Plans, stakes, etc.

2. All work under these specifications is to be in accordance with the plans, profiles, and schedules forming part of these specifications, and to the lines and levels given on the ground by the engineer. Stakes and bench marks placed for this purpose are not to be moved or effaced when avoidable.

Width of road.

3. The width of road shall be uniform unless otherwise directed, for curves or other irregularities, widths of grade between shoulders to be twenty-four feet, and the stone or gravel 8 feet wide for single track roads and 15 feet wide for double track.

Crown.

4. The finished and consolidated roadway is to be circular and have an average crown of one inch to the foot from side to centre. Earth excavation and the placing of stone are to be uniformly such as will produce that camber, except as otherwise directed by the engineer in case of hills, swamps, rock outcrops, and other irregular conditions. Where the width and quality of stone used in the road will permit, the average crown may be reduced to one-half an inch to the foot if so directed by the engineer.

Excavation and fill.

5. Excavation or fill is to be made in all cases to the required depth below the elevation of the finished roadway. Surface soil, vegetable mould, logs, stumps, or other weak or perishable material are to be removed to a sufficient depth to secure a firm foundation, and such excavation shall be filled with durable material to the height of the sub-grade. The sub-grade thus obtained is to be made thoroughly firm and

solid by pounding and rolling. In swamp land, roots and muck are, if practicable, to be removed in advance of fill, to a firm bearing.

Roadsides.

6. The land at the sides of the road, between the gutters or open drains, and the fences, is to be graded from margin of the roadway, as may be directed, the roadsides to be left smooth by grading and levelling, care being taken not to injure or bark trees and shrubs that may be marked for preservation, or where such preservation is directed by the engineer.

Lane and road intersections.

7. All intersections of roads, lanes and entrances are to be properly graded, and stoned or gravelled as directed, to conform to the finished grades of the intersecting roadways; and tile or other culverts or crossings are to be well laid under instructions from the engineer.

Broken stone surface and quality of stone.

8. The surface of the roadway is to be covered with crushed stone to a minimum depth of eight inches after consolidation, to be regularly and perfectly spread over the whole of the roadbed to a depth to conform to the cross section shown on the drawings. The crushed stone is to be durable limestone, granite or field stone, of such quality and broken to such dimensions as may be approved by the engineer. All stone used must be free from clay, loam or earthy material. Samples of material to be used are to be placed with the engineer, and all material is thereafter to conform to the quality of such samples.

Placing stone on the roadway.

9. The broken stone is to be placed on the roadway in the following manner:

(*a*) Coarsely crushed stone or "tailings" of a size that will pass through a four-inch ring, and be retained by a two and one-half inch ring, is to be placed over the central portion of the sub-grade to such a depth and width as the total depth of stone will permit; this is to be rolled dry to a firm and even surface, and additional stone is to be added wherever depressions appear, or the camber becomes too flat under the roller. Where "tailings" are not available, their place shall be taken by the grade of stone described in the following sub-section.

(*b*) Upon this shall be spread a layer of crushed stone, such as will pass through a three-inch ring, and be retained by a one and one-half inch ring, to be four inches in depth after consolidation at the centre, and such further depth at the centre and sides as will bring the roadway to the line of the finished grade, this to be rolled dry, to a firm and even surface. Additional stone is to be added wherever depressions appear or the camber becomes too flat under the roller.

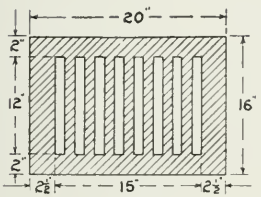
(*c*) The roadway so formed shall be coated with screenings; these to be thoroughly saturated and rolled until perfectly consolidated to the satisfaction of the engineer. Screenings are to consist of stone chips and dust, such as will pass a one and one-half inch ring, an excess of dust to be removed by a dust jacket attached to the screen if required by the engineer. Screenings are not to be dumped from wagons on the stone, but are to be spread from the wagons or from piles deposited along the roadside.

Screenings not to exceed necessary amount.

10. Special care must be taken that the screenings shall not be in excess of the quantity necessary for consolidating the road, nor shall less be used than is needed to maintain a smooth surface. The screenings shall be uniform and thinly spread, and additional quantities shall be added as may appear necessary after watering. Screenings are

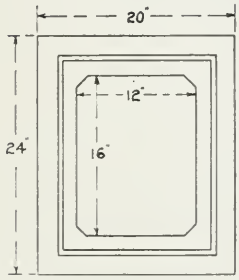
DETAIL OF CATCH BASIN

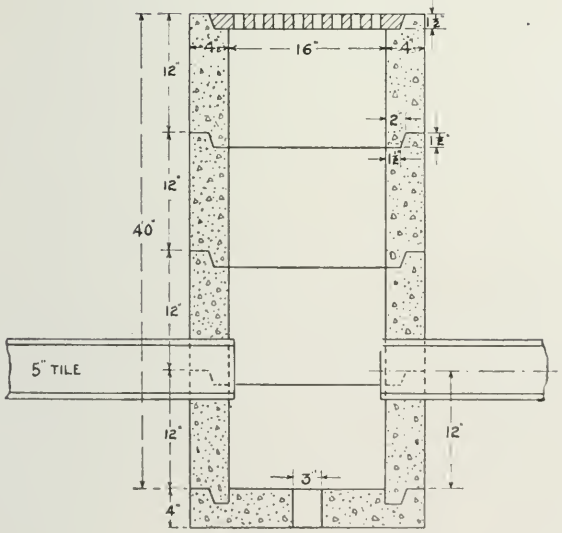
CAST IRON GRID.



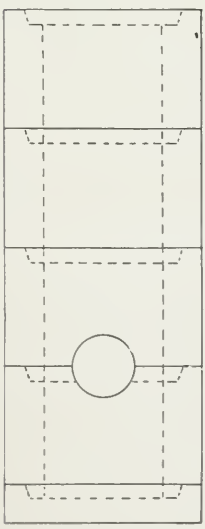
1 INCH SPACES

VIEW OF TOP WITH GRID REMOVED





CROSS-SECTION



SIDE VIEW

to be added to or removed from the surface as may appear necessary to the engineer, at any time during the progress of the work.

Manner of rolling and wetting roadway.

11. Rolling shall be commenced at the edges or curb of the road, working towards the centre, and shall be continued until the earth subgrade and each layer in succession is firmly set. The final rolling must be continued until the roadbed is perfectly consolidated and unyielding, to the satisfaction of the engineer. During the whole of the final rolling herein specified, a sprinkling cart is to pass immediately in front of the roller, so that at all times the surface of the road will be saturated with water.

Gravel.

12. Gravel where expressly permitted by the engineer shall have a minimum consolidated depth of eight inches, and the widths of metal, drainage, grading and all other details and requirements wherever applicable, as stated elsewhere in this specification, shall apply. The gravel used shall be clean, free from an excess of clay, loam or sand; shall be compact and composed of varying sized grains up to two inches diameter. If the gravel contains large stone these are to be removed at the pit, or if drawn to the road may be raked forward and spread in the bottom of the road. Should the gravel contain an excess of large stone, or of fine material, treatment by crushing, or screening, or both, shall be provided, such as is necessary to produce a satisfactory road metal. Where gravel does not consolidate readily or sufficiently by rolling, approved material, such as limestone screenings, may be lightly spread over the surface to provide the necessary bond. The gravel, spread to a uniform depth, shall be made wet by sprinkling and rolled until thoroughly consolidated. When crushed or screened gravel is used, care must be taken to use no more screenings on the surface than is necessary for consolidation. The quality of gravel, preparation, method of placing on the road, and means of consolidation must be, in all respects, approved by the engineer.

Surface drainage.

13. Open drains or gutters shall be formed along each side of the roadway, of sufficient capacity to carry to an outlet all water entering them, the grade of such drains to follow where practicable that of the roadway, but preferably having a minimum fall of three inches in 100 feet. The slope of gutters is to be uniform and without pockets or depressions. On hills and hillsides, where suitable outlets cannot otherwise be obtained, surface water shall be received into catch-basins at suitable intervals, and discharged to an outlet through underground tile, vitrified sewer pipe being preferably used for that purpose. On hills, concrete or cobble-gutters, may be required where the rush of surface water is likely to cause erosion.

Tile drainage.

14. Tile drains, where required to remove an excess of sub-soil water, to tap springs, to effectively dispose of surface water, to protect hills or road intersections, shall in general be placed along the side of the roadway, under the open drain or gutter, and shall be of not less diameter than five inches. The tile are to be placed in an eight-inch trench, the bottom of the trench to be 36-inches below the sub-grade of the roadway. They are to be uniformly and evenly laid with a fall of not less than three inches in one hundred feet to a proper outlet, and with ends closely abutting. All tile used shall be of the best quality of clay, manufactured expressly for drain purposes, in lengths not less

than one foot, and of uniform diameter throughout. Earth excavated in the laying of these drains shall be returned to the trench, being consolidated on hills or slopes if considered necessary by the engineer, to prevent its being washed out, and in every case so disposed of as not to interfere with surface drainage. Where the bottom of the trench is in quicksand, satisfactory means are to be used to keep the tile in a true line, and free from sediment, by laying on a board, surrounding with cinders, sawdust, cotton or cheesecloth.

Foundation of large stone, etc.

15. Where the natural roadbed is weak, flat, or for other reason a strong foundation is desirable, a foundation shall be laid below the stone referred to in Section 9 of this specification, such foundation to be constructed of cobble stone, coarse gravel, or rough quarry stone of a size not exceeding eight inches in largest dimension, and of such depth as, in the opinion of the engineer, the work may require. This foundation is to be rolled to the satisfaction of the engineer; this to be followed by crushed stone as described in Section 9 of this specifition. Roads of light or blow sand are to have an eight-inch layer of clay, or gravel containing clay, laid as a base for the metal covering, such clay or gravel to be thoroughly rolled and consolidated before the metal surface is applied.

Side slopes.

16. Side slopes in cuts and fills are to be one and one-half feet horizontal to one foot vertical. Earth for fills on side hills and through ravines, where the grade cutting does not provide sufficient material, is to be obtained from the tops of hills, or such other point as directed in order that the natural slope of the earth may be maintained and slipping prevented as far as practicable.

Rip-rap.

17. Rip-rap where required to protect the face of embankments or the foot of slopes, unless otherwise directed, shall be of undressed field or quarry stone, laid by hand to a uniform thickness, each stone to be firmly embedded, and at a slope not exceeding one foot horizontal to one foot vertical. The largest stone adapted to the work is to be used.

Concrete tile culverts.

18. Concrete tile culverts where required are to be of such size and length and at such depths as may be determined by the engineer, and are to be placed where shown on the plans hereto attached. Culverts are to be laid with a good fall and free outlet, so that water will not stand in them. The spigot end is to be down grade and joints are to be fitted and made tight with cement mortar. The trench to receive the tile is to have a concave bed, so that the tile will have an even bearing, the earth is to be firmly packed and rammed around the tile, and a minimum depth of one foot of earth is to cover the tile. Each end of the culvert is to have a concrete headwall sunk below the frost line and of such dimensions as may be necessary for a retaining wall to suit the situation. Concrete tile are to be strong and of the best quality, sound, free from all defects, smooth, uniformly circular and made in accordance with an approved specification.

Catch basins.

19. Concrete catch basins in accordance with the plans hereto attached are to be placed and connected with tile drains at such point and at such depth as the engineer may designate, iron covers for this purpose to be provided.

Cobble-stone gutters.

20. Cobble-stone gutters will generally be three feet wide, but are to be of such width and contour as the situation may require. They are

to be made of stones from 4 inches to 6 inches long, and from 2 inches to 4 inches wide, set on end and bedded in an 8-inch layer of gravel or coarse sand. The upper interstices of the stones are to be filled with fine gravel or coarse sand, and the whole thoroughly rammed to a firm bearing.

Concrete gutters.

21. Concrete curbs and gutters, if required, shall, unless otherwise directed, be in accordance with the dimensions shown on the drawings hereto attached. The Portland cement, all materials, methods and workmanship shall conform to the best of modern practice and standards. The curbing and gutters shall be laid on a six-inch bed of gravel or broken stone, which shall be thoroughly tamped and consolidated. The curb and gutter shall consist of a concrete core or backing, with a one-inch surface coat of mortar; the concrete core to be mixed in the proportion of one part of Portland cement, three of sand, and five of broken stone; the surface coat to consist of one part of cement and two parts of sand.

The entire exposed surface shall be neatly faced by floating and trowelling with a coat of neat cement, and finished with a dampened bristle brush, so as to give a uniform color throughout.

The work shall be carried on as rapidly as the concrete can be thoroughly rammed, and the whole curb and gutter shall be completed while in a soft and plastic state, so that it will be monolithic when set.

The curb shall be divided into sections eight feet in length by such means as will insure complete separation. At road and lane intersections the curb shall be made on a curve of suitable radius, with true and even joints.

The temporary forms used in shaping the gutter and curb shall be set accurately and firmly in place.

ACT TO AID IN THE IMPROVEMENT OF PUBLIC HIGHWAYS.

7 Edward VII., Chapter 16; *with amendment* 10 *Edward VII., Chapter* 14, *adding sub-section* (2) *to Section* 11; *and amendment* 1 *George V., Chapter* 11, *adding sub-section* (3*a*) *to s.* 2, *ss.* (3).

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

$1,000,000 appropriated for road improvements.

1. The sum of $1,000,000 is hereby set apart to be paid out of the Consolidated Revenue Fund of the Province to aid in the improvement of public highways subject to the terms and conditions hereinafter set forth. 1 Edw. VII., c. 32, s. 1.

County by-law adopting system of road improvement.

2.—(1) The county council of any county may by by-law adopt a plan for the improvement of highways throughout the county by assuming highways in any municipality in the county in order to form or extend a system of county highways therein, designating the highways to be assumed and improved and intended to form or be added to such system; and in case it may be impracticable to benefit all the townships in any county equitably by a system of county highways, such plan may provide for compensation to any township or townships which by reason of the location of such highways or of the unequal distribution of the

expenditure thereon, may not benefit proportionately, by a grant of such specific amount or annual sum or both, to be expended in the improvement of the highways of such township or townships as when so expended will make such a plan equitable for the whole county.

Plan may include abolition of toll roads.

(2) A plan adopted by the county council, under this section, may include the purchase of toll roads or freeing the same from toll. 1 Edw. VII., c. 32, s. 5.

Grants to incorporated villages and towns.

(3) A county council may from time to time while carrying out a plan of road improvement under this Act, by by-law make grants to incorporated villages or towns not separated from the county, for the purpose of improving such highways or portions of highways in such villages or towns as may be designated in such by-law and which are extensions of, or form connections between different portions of county roads, but no such highway shall by reason of such by-law or of the expenditure of any such grant thereon be deemed to have been assumed by the county or to form part of the county system of highways. 3 Edw. VII., c. 26, s. 7.

Grant to certain towns and villages by county.

(*a*) A grant made under subsection (3) to a town or village having a population of not more than 3,000 shall be deemed to form part of the estimated expenditure in carrying out a plan of road improvement in such county for the purpose of ascertaining the amount of aid which may be granted to the county under this Act.

Proviso.

Provided, that the roads or streets to be improved in the town or village have been designated by the By-law of the council of the county, to which there shall be attached a plan of the town or village to be aided, and that such By-law has been approved by the Minister of Public Works, and that the work done upon such roads and streets is in accordance with the regulations of the Department of Public Works with respect to Highways.

Proviso.

Provided, that in the case of a town or village having a population of more than 1,500, the amount granted under subsection (3) shall be expended solely upon roads and streets or portions thereof which lie opposite to lands on one side or the other thereof used for agricultural purposes; and

Proviso.

Provided, that the approval of the Minister of Public Works in writing shall be conclusive as to the population of any town or village for the purposes of this subsection.

Amendment made to section not to affect grants heretofore made.

The amendment made by this section shall not affect the payment to a town or village under the said subsection (3) of any grant made by the council of a county and approved by the Minister of Public Works before the passing of this Act, and any such grant shall be included in estimating the expenditure of the county for the purpose of ascertaining the amount of aid to which the county is entitled under the said *Act*. 7 Edw. VII., c. 16.

for the Improvement of Public Highways as if this section had not been passed. 1 George V. c. 11.

Regulations of Public Works Department.

(4) Every highway constructed or repaired in pursuance of a plan adopted by by-law approved by the Lieutenant-Governor in Council under this Act shall be constructed or repaired according to the regulations of the Public Works Department with respect to highways. 1 Edw. VII., c. 32, s. 6.

By-laws passed by two-thirds vote not to require assent of electors.

(5) Where a by-law passed under the authority of this Act has received the assent of two-thirds of the members of the county council representing at least one-half of the total equalized assessment of the county, it shall not be necessary to submit the same to the electors of the county; provided that if before the final passing of any by-law under this Act the same has been submitted to and has received the approval of the electors of the county qualified to vote on by-laws for the creation of debts, such by-law may be finally passed by a majority of the members of the council present and voting thereon; and provided further that a by-law so submitted to the electors may after such submission or after the final passing thereof be amended by the council in order to comply with any direction or requirement of the Minister of Public Works, and it shall not be necessary to submit any such amending by-law to the electors. 8 Edw. VII., c. 23.

Approval of by-law by order in council.

3.—(1) No county shall be entitled to receive any portion of the sum set apart by this Act until the by-law adopting a plan for the improvement of highways therein, passed under the provisions of this Act, together with an estimate of the cost of the proposed work, has been approved by the Lieutenant-Governor in Council. 3 Edw. VII., c. 27, s. 4.

Minister may obtain report on work.

(2) Upon the application of any county council for the approval of a by-law under this Act, the Minister of Public Works may obtain such report upon the plan adopted by such county council as he may deem necessary and may hear any township council which may be dissatisfied therewith before presenting such application for consideration of the Lieutenant-Governor in Council.

Payments to county out of appropriation.

4. (1) When a plan of road improvement adopted by by-law, approved by the Lieutenant-Governor in Council under this Act has been carried out, or at any time during the progress of the work, the county council may submit to the Department of Public Works a statement setting forth the expenditure to date in carrying out the said plan, including all payments of grants authorized by this Act, together with the declaration of the treasurer of such county that such statement is correct, and also the report of the county engineer or road superintendent that such work is in accordance with the regulations of the Department of Public Works, and on the receipt of such statement and certificate by the Provincial Treasurer, certified and approved by the proper officer of the Department of Public Works, the Lieutenant-Governor in Council may direct the payment to such municipal corporation out

of the fund set apart under this Act of a sum equal to one-third of the amount of such expenditure. 6 Edw. VII., c. 43, s. 2.

Work in united counties.

5. The council of any union of counties which has passed a by-law under this Act designating the roads to be improved within the united counties, after such by-law has been approved by the Lieutenant-Governor in Council may with the consent of two-thirds of the representatives of any county in the union by by-law apportion the amount to be expended in any year in such county and may provide that the amount so to be expended shall be raised by special rate upon the property liable to taxation in such county, or with the like consent the council of the united counties may by by-law provide for the issue of debentures for the amount to be expended and may declare that such debentures shall be a charge upon the property liable to taxation in such county, and that the amount required to be raised annually for principal and interest of any debt so created shall be levied and collected in each year during the currency of the said debentures by an annual special rate upon the property liable to taxation in such county. 6 Edw. VII., c. 43, s. 3.

Issuing debentures for expenditure on highways.

6. The municipal council of any county taking advantage of this Act, may raise by debentures, payable in thirty years, as provided by *The Municipal Act,* such sums of money as may be necessary to meet any expenditure on highways under this Act, but in no case shall the debentures issued under this Act exceed two per cent. of the equalized assessment of the county. 1 Edw. VII., c. 32, s. 9; 2 Edw. VII., c. 12, s. 17 (1).

Statute labour, application of upon roads aided.

7. The council of any township may by by-law direct that the statute labor for which lands fronting on roads in such township constructed or repaired under this Act may from year to year be liable may be commuted, and the amount so received may be paid over to the county and applied in repairing such roads and in removing snow therefrom and keeping the same open during the winter months. 5 Edw. VII., c. 27, s. 2.

Aid to county where road system established prior to 7 Edw. VII., c. 16.

8. Where before the passing of this Act the council of any county had established a system of county roads approved by the Lieutenant-Governor in Council as provided by *The Act for the Improvement of Public Highways,* such system of county roads shall be deemed to be within the meaning and intent of this Act. 3 Edw. VII., c. 26, s. 6.

Intersection of other highways by county road.

9. Wherever a county road intersects a highway which is not a county road the continuation of the county road to its full width across the road so intersected, including the bridges and culverts thereon or touching thereon, shall be a part of the county road system. 3 Edw. VII., c. 26, s. 8.

County Council not liable for sidewalks on county roads.

10. A county council shall not be liable for the building, maintenance or repair of sidewalks on any county road or portion thereof. 3 Edw. VII., c. 26, s. 9.

Counties to have powers as to snow fences. Rev. Stat. c. 240.

11.—(1) The county council shall in respect to county roads have all the powers given to townships, cities, towns and incorporated villages under *The Act respecting Snow Fences.* 3 Edw. VII., c. 26, s. 10.

Powers of County Council over roads assumed

(2) The county council shall, in respect to said roads, have all the rights, powers, benefits and advantages conferred either by by-law or contract or otherwise, upon the local municipality or municipalities which had jurisdiction over said roads before said roads were assumed by such county council, and the said county council may sue upon such rights or under such agreements or by-laws in the same manner and to the same extent as the said local municipality or municipalities might have done if such roads had not been adopted as county roads. 10 Edw VII., c. 14.

Roads in respect of which aid granted to be county roads.

12. Except as in subsection 3 of section 2 of this Act otherwise provided, all roads constructed or repaired under this Act, and for the construction or repair of which aid may hereafter be granted out of the fund set apart under this Act, shall thereafter be deemed to be county roads and shall be maintained and kept in repair by the corporation of the county in which such roads are situate. Provided that after three years subsequent to the construction and completion of the county system of roads the county council may with the approval of two-thirds of the minor municipalities in the county expressed by by-law declare that such system of county roads shall on the 1st day of January, following, revert to the local municipalities in which the same are situate, and such roads shall thereafter be maintained as township roads. 5 Edw. VII., c. 27, s. 4.

1 Edw. VII., c. 32 and amendments repealed.

13. The Act passed in the first year of His Majesty's reign, Chaptered 32, and the amendments thereto, are repealed and the foregoing provisions are substituted therefor.

REGULATIONS RESPECTING HIGHWAYS.

The following are the regulations of the Public Works Department with respect to county road systems, under the Act to Aid in the Improvement of Public Highways, 7 Edward Seventh, Chapter 16, Section 2, Subsection 4, upon compliance with which the county becomes entitled to the Provincial grant of one-third of the cost of construction.

Management.

1. The management of all road improvement under the Highway Improvement Act is to be centralized in a capable county road superintendent (or engineer) appointed by and acting under the direction of the county council. A foreman is to be placed by the road superintendent (or engineer) in charge of any works which he cannot personally oversee.

General character of work.

2. Improvements are to be of a character suited to the requirements of the district, as regards the amount of travel, nature of the soil, quality of road metal available, and other local conditions.

Road accounts

3. An approved system of keeping road accounts is to be adopted, showing the extent and location of each work of improvement, and the cost of labor and materials used. Expenditure for maintenance and repair, or other outlay not chargeable under the Highway Improvement Act, is to be kept separate and distinct from construction costs. Time sheets or time books are to be used for the payment of men. Such returns, reports and statements, respecting all details of work, methods and expenditure, are to be supplied to the Provincial Engineer of Highways as he may from time to time require. Blank forms for annual returns will be supplied to county engineers or other officials upon request.

Cost of maintenance.

4. The cost of maintaining and repairing roads before or after their construction is not to be a charge under the Act. This includes such items as patching holes and ruts, weed cutting, snow cleaning, machinery repair, and any temporary or other work not forming part of permanent construction. A separate statement of expenditure for repairs is to accompany the annual Departmental returns.

Statement of completed work.

5. Returns to the Department are to show definitely, according to township, lot and concession, the location and terminal points of the work done; thereafter similar work for that road is not to be a charge upon the Province. Each section of road is to be fully completed at one time unless circumstances do not permit. A repeated charge for any class of work, such as draining, grading, metalling, etc., will not be allowed; but when reported by the county engineer, is to be regarded as finally completed for that class of work on the defined section of road.

Financial year to close Nov. 15.

6. Statements of annual expenditure are to close on November 15th of each year, and are to be transmitted to the Minister of Public Works as soon thereafter as circumstances will permit.

Old and new roads.

7. "Old" roads herein referred to, include such highways as have been previously well graded and metalled with gravel or broken stone, and which have a solid and deep road-bed. Former toll roads, and roads of a similar character will usually fall within this class.

"New" roads in general include earth roads which may or may not have been previously graded, and which have had little or no gravel or stone placed upon them.

"Single track" roads shall be those metalled from 8 to 11 feet wide; and "double track" roads shall be those metalled from 12 to 16 feet wide.

Work on old roads.

8. Work on old gravel or stone roads of the nature of reconstruction or repair may consist of:—

(*a*) Grading by cutting away shoulders of earth and sod at the sides, and improvement of drainage.

(*b*) Grading, draining and metalling with good gravel or broken stone, or other approved surface material.

Work on new roads.

9. Work on new roads may consist of: —

(*a*) Grading and draining.

(*b*) Grading, draining and metalling with good gravel or broken stone, or other approved surface material.

Mannal of Roadmaking.

10. Construction is to be guided by the last revised "Principles of Roadmaking," issued by the Provincial Engineer of Highways, except as more specifically stated in these regulations.

Grading and grades.

11. It is essential that all roads be permanently graded and turnpiked before putting on gravel, broken stone or other surface material. In this see that old gravel and stone road-beds are not unnecessarily injured or destroyed by being covered with earth and sods from the sides. (Vide Section 25.) Roads are to be given easy, flowing, uniform grades, cutting down hills and knolls, and filling depressions. The standard grade shall be 4 per cent.; but a maximum rise of 8 per cent. may be permitted. Thorough grading is insisted upon.

Roads to be straightened.

12. The roadway graded for traffic is to be as straight as practicable, and in the centre of the road allowance, with a uniform width between the inside edges of the open ditches, and all work is to be carefully staked out for this purpose in advance of draining, grading and metalling.

Width between ditches.

13. The width of the roadway, shoulder to shoulder, on cuts and fills should not be less than 18 feet. Main roads should be graded to a width of 24 feet, and roads of least travel should not be less than 18 feet.

Side slopes.

14. Side slopes in cuts and fills are to be one and one-half feet horizontal to one foot vertical.

Crown.

15. The crown or camber given the newly finished and consolidated roadway is to be uniform and on single track roads is to have a rise of one inch to the foot from the shoulder of the ditch to the centre of the road. On double track roads metalled with broken stone and thoroughly consolidated by rolling, a crown of one-half inch to the foot will be sufficient. Special care is to be given to the crown at or near the top of hills; and the crown on hills is to be sufficient to turn the water to the gutters, and prevent it from following the wheel tracks.

Width of metal.

16. Road metal (gravel or broken stone) is to be placed in the centre of the grade, to a width and depth sufficient to form a serviceable road, having due regard to the character and extent of traffic.

Minimum width of metal.

17. The gravel or stone spread on the road should not be of a less width than eight feet, nor of a less depth than eight inches, and is to be in continuous stretches, preferably not less than one mile in length. Ordinary patching and repair is not a work within the meaning of the Act.

18. The gravel or broken stone used on the road should preferably be obtained in the vicinity of the road, but must be of good quality. Use local metal if suitable.

19. The stone used may be broken field stone, quarry stone, or crushed and screened gravel, care being taken to select a durable quality such as will withstand wear and exposure to the atmosphere, discarding weathered limestone, friable sandstone, or other weak metal. Quality of stone.

20. Gravel is to be clean, moderately coarse and free from an excess of clay, sand or earthy material. Quality of gravel.

21. In applying natural pit gravel containing many large stones, the large stones are to be raked forward from the loose gravel, spreading them so as to be underneath the next load and in the bottom of the road. Coarse gravel.

22. The gravel or broken stone placed on main roads is to be thoroughly rolled. Roads of less importance, if not rolled, are to be maintained by raking or trimming with a grader until consolidated by traffic. Each county shall have at least one steam roller. Rolling.

23. Stone when crushed is to be elevated into bins from which it can be conveniently and quickly loaded into wagons. Load stone from bins.

24. Clay, sod, or other earthy material is not to be used as a surface dressing or binder on broken stone roads. Stone screenings are to be used for this purpose. Care is to be taken that an excess of this surface dressing is not used. Surface dressing.

25. Where roads have heretofore had gravel or broken stone placed on them, they should be reconstructed or repaired by cutting off shoulders with a grader, and adding a sufficient amount of gravel or broken stone to fill ruts, depressions, properly crown and make a road sufficiently strong to accommodate the travel. The sod and soft material is to be thrown outward, never drawn to the centre. Repairing old roads.

26. Good drainage is of primary importance. Provide open drains at the sides of the road, with a constant fall to a free outlet, with sufficient capacity to carry away surface water. Drainage.

27. Tile under drains are to be laid to carry away excessive sub-soil water, lower the water-line, and secure a dry road-bed wherever a moist, damp or springy condition of the sub-soil exists. Tile drainage.

28. Durable sluices and culverts are to be built when necessary. Bridges must be substantial in character, preferably of concrete or steel. Culverts and bridges.

29. Bridges are to comply with the approved specifications of the Provincial Engineer of Highways; all forms of tender, specifications, and the work throughout, are to be in charge of an engineer qualified to see that such specifications for steel bridges are carried out. Wherever practicable, bridges are to be built by contract, for which tenders shall be received after due public notice has been given. Bridges.

30. Modern roadmaking machinery, equipment, implements and plant are to be used, so as to secure the greatest results from the expenditure, and to provide the best work. Machinery and other equipment is to be sufficient only for proper construction, and authority to purchase is subject to approval. Machinery.

31. Work is to be carried on in such manner and at such rate as will ensure completion of the designated system of roads without unnecessary delay and within a reasonable period, consistent with the total extent and cost of construction. Rate of construction.

Classification of county roads.

32. When in any county the roads assumed as county roads are not of equal importance, they may be classified, and the nature and extent of improvement to be carried out on each class designated by the Provincial Engineer of Highways. Provincial liability shall thereafter be limited to one-third of the cost of improvement so designated.

Approval of Provincial Engineer of Highways.

33. Plans of construction, systems and means of carrying on the work, contracts and specifications pertaining thereto, are to be such as will produce durable construction with economy of outlay, and are to be submitted for and shall be subject to approval.

Interpretation

34. The words "approved" or "approval" wherever used in these regulations shall mean approval by the Provincial Engineer of Highways, and whose decision as to the scope, intention and interpretation of these regulations, or any part thereof, is to be final.

Varying from regulations.

35. Where, owing to special local conditions, any departure from the foregoing regulations may be desired, upon application of the council, or the County Engineer or Road Superintendent, an examination of the road or roads or circumstances in question will be made by the Provincial Engineer of Highways or his representative for the purpose of deciding with regard thereto.

W. A. McLean,
Provincial Engineer of Highways.

J. O. Reaume,
Minister of Public Works.

GENERAL SPECIFICATIONS FOR STEEL HIGHWAY BRIDGES.

Material.

1. The bridge superstructure provided for under these specifications shall be of medium steel, with the following exceptions: Rivets shall be of soft steel, and pins and rollers of high steel. Important castings, such as machinery of movable bridges, shall be of steel, but all cast ornamental work, such as newel posts, may be of iron. The flooring shall be of reinforced concrete, and felloe guards may be of steel or reinforced concrete.

Types of Bridge.

Design of bridge.

2. The general type of girders and trusses, unless more specifically stated, may be determined by the bidder, but shall preferably be:

(1) Rolled beams for spans up to 35 feet.

(2) Riveted low trusses or girders for spans of 35 feet to 90 feet.

(3) Riveted high trusses for spans of 90 feet to 250 feet.

(4) Pin-connected or riveted trusses with inclined chords for spans of 200 feet to 300 feet.

(5) Deck spans wherever suitable.

(6) Warren and Pratt trusses will be favorably considered for spans of 35 feet to 200 feet; and Petit trusses for bridges over 200 feet in length.

It is understood that the foregoing limiting lengths are not absolute, but may be varied. The design is in all cases to be such that the stresses in essential members and their connections can be fully determined.

General Dimensions.

Widths and head-room.

3. The general dimensions shall be as elsewhere specified, but in all cases, from the top of the floor to the under side of the top lateral bracing of through bridges, there shall be a minimum head-room of 14 feet. The clear width of sidewalk should not be less than 4 feet and the clear width of roadway shall preferably be not less than 16 feet, but may be 14 feet for country bridges not on main highways. The clear width of side walks shall mean the distance between the cover plates of end posts and the inside of the hand rail. The clear width of roadway shall mean the distance between cover plates of end posts, or the distance between the inside edges of hand-rail, if such railing projects inside the cover plates of the end posts. In all cases, the clear width of floor shall be one foot less than the clear width of the bridge as defined above, unless otherwise specified by the engineer.

Loading.

Classification.

4. Bridges will be classified according to loading as follows:

(*a*) Bridges suitable for main county roads.

(*b*) Bridges suitable for roads of light rural traffic and for less permanent requirements.

(*c*) Bridges suitable for heavy traffic in towns and cities.

Class "A".

Dead load.

5. Each structure shall be designed to carry the following loads:

(1) A dead load consisting of the total weight of metal and other material in the bridge, provision being made for steel stringers and a concrete floor at least six inches in thickness, the weight of concrete to be assumed at 150 pounds per cubic foot.

Uniform live load.

(2) A uniform live load considered as covering the whole or any part of the bridge for spans 100 feet and under, 100 pounds a square foot of floor space; for spans 200 feet and over, 80 pounds a square foot; for spans of intermediate length, the weight to be reduced uniformly from 100 pounds to 80 pounds a square foot. Floor space considered, is to include sidewalks.

Concentrated live load.

(3) A concentrated live load of 15 tons passing over any portion of the bridge, on two axles at 10 feet centres and 6 feet gauge, two-thirds of the load to be carried on the rear axles. When stringers are not more than 3 feet apart, centre to centre, the concentrated wheel load may be considered as supported by two stringers, each carrying one-half of the load.

Floor slab load.

(4) For reinforced concrete bridge floor slabs, a concentrated load of 3,000 pounds midway between stringers and resting on a base one foot wide.

Wind stresses.

(5) In spans of 200 feet or less the top lateral bracing in deck bridges and the bottom lateral bracing in through bridges shall be proportioned to resist a horizontal force of 300 pounds per foot of span, 150 pounds of which shall be treated as a moving load. The bottom lateral bracing in deck bridges, and the top lateral bracing in through, shall be proportioned for a lateral force of 150 pounds for each foot of span. For spans exceeding 200 feet, add 10 pounds for each additional 30 feet, in each of the foregoing cases.

Truss members.

Strains in truss members from assumed wind forces need not be considered except to provide:

(*a*) That the wind strains on any member shall not exceed by more than 25 per cent. the maximum fixed for dead and live loads.

(*b*) That the wind strain alone, or combined with a possible temperature stress, shall not neutralize or reverse the strains in any member.

Class "B".

6. Each structure shall be designed to carry the following loads:

Dead load.

(1) A dead load similar to Class "A."

Uniform live load.

(2) A uniform live load considered as covering the whole or any part of the bridge, for spans 100 feet and under, 80 pounds a square foot of floor space; for spans 200 feet and over, 50 pounds a square foot; for spans of intermediate length, the load to be reduced uniformly from 80 pounds to 50 pounds a square foot. Floor space considered is to include sidewalks.

Concentrated live load.

(3) A concentrated live load of 10 tons passing over any portion of the bridge on two axles at 10 feet centres and 6 feet gauge, two-thirds of the load to be carried on the rear axles. When stringers are not more than 3 feet apart, centre to centre, the concentrated wheel load

may be considered as supported by two stringers, each carrying one-half of the load.

(4) For concrete bridge floor slabs, a concentrated load similar to Class "A." Floor slabs.

(5) Wind forces similar to Class "A." Wind forces.

Class "C".

7. Each structure shall be designed to carry the following loads:

(1) A dead load as in Class "A." Dead load.

(2) A uniform live load similar to Class "A," except that for spans up to 30 feet the loading shall be 135 pounds a square foot, to be reduced proportionally to 100 pounds for spans up to 100 feet in length, the loading on sidewalks not to exceed 100 pounds a square foot. Uniform live load.

(3) A concentrated live load of 20 tons passing over any portion of the bridge on two axles at 10 feet centres and 6 feet gauge, two-thirds of the load to be carried on the rear axles. When stringers are not more than 3 feet apart, centre to centre, the concentrated wheel load may be considered as supported by two stringers, each carrying one-half of the load. Concentrated live load.

(4) For concrete bridge floor slabs, a concentrated load of 4,000 pounds midway between stringers, and resting on a base one foot wide, and to be otherwise in accordance with Class A. Floor slab.

(5) Wind forces as in Class "A," except that in spans of 200 feet or less the top lateral bracing in deck bridges, and the bottom lateral bracing in through bridges, shall be proportioned to resist a horizontal force of 500 pounds per lineal foot of span, one-half of which shall be treated as a moving load; the bottom lateral bracing in deck bridges, and the top lateral bracing in through bridges, to be proportioned for a horizontal force of 200 pounds for each foot of span. Wind forces.

Impact.

8. To provide for vibration and impact the dynamic increment of the live load stress shall be added to the sum of the dead and live load stresses and shall be determined by the following formulæ: Impact.

9. For members stressed in one direction only Stresses one direction only.

$$I = \left(0.40 - \frac{S}{500}\right)\frac{L^2}{L+D}$$

Where I = Impact Stress
L = Live Load Stress
D = Dead Load Stress
S = Minimum loaded distance in feet producing the maximum stress in the member

10. For members having alternate live load stresses of tension and compression, the impact will be the quotient of the square of the numerical sum of the live load stresses divided by the maximum stress that can be produced in a member at any one period of time and reduced by the formula $(0.40 - \frac{S}{500})$. The impact will be considered either as tension or compression, and shall be added to the algebraic sum of the dead load stress and the live load tension stress, or the dead load stress and the live load compression stress. Where the live load stress of opposite sign from the dead load stress exceeds 50 per cent. of the dead load stress, members shall be capable of resisting either combination. Alternate stresses.

Opposite stresses.

11. In members such as counters which have dead and live loads of opposite character, only 70 per cent. of the dead load stress shall be considered as effective in counteracting the live load and impact stresses. In such members the impact shall be one-half of the live load stress; and the stress used in proportioning the section of the member will be the algebraic sum of 70 per cent. of the dead load, the live load and the impact, or the dead load stress in case such is existent alone; whichever produces the maximum.

No impact for lateral or wind forces.

12. Impact stresses shall not be added to stresses produced by lateral or wind forces.

Effective lengths for calculation,

13. For pin connected spans effective length shall be the distance between centres of end pins of trusses. For riveted girders it shall be the distance between centres of bearing plates. For stringers it shall be the distance between centres of cross girder webs. For cross girders it shall be the perpendicular distance between central planes of trusses. For columns, posts and chords it shall be the greatest length between points of axis that are rigidly held in the direction in which the strength is being considered. These effective lengths are to be used in calculating moments, stresses and working strengths.

Effective depths for calculation.

14. Effective depth for pin connected trusses shall be the perpendicular distance between gravity lines of chords, which lines must pass through centres of pins; for plate girders and open web riveted girders, the perpendicular distance between centre lines of gravity of upper and lower flanges, but never to exceed the depth from out to out of flange angles.

Stresses.

15. All parts of the steel structure shall be so proportioned that the following unit stresses in pounds per square inch shall not be exceeded:

Tension.	(1) Axial tension on net section	16,000
Compression.	(2) Axial compression on gross section	$16{,}000 - 70\frac{l}{r}$
	In which l equals length of member, centre to centre, of end connections in inches, and r equals least radius of gyration of member in inches.	
Bending.	(3) Bending on extreme fibres of rolled I-beams, channels, built sections and girders (net section)	16,000
	Extreme fibres of pins	24,000
Shearing.	(4) Shearing:	
	Shop-driven rivets	10,000
	Field-driven rivets	8,000
	Plate girder webs (gross section)	10,000
	Pins	12,000
Bearing on rivets.	(5) Bearing:	
	Shop-driven rivets	20,000
	Field-driven rivets	16,000
	Pins	24,000
Rollers.	(6) Steel expansion rollers, per lineal inch In which d is the diameter in inches.	600 d

Bearing on masonry.

16. Bearing under bed plates, in pounds per square inch, shall be as follows:

Stone or gravel concrete	500
Granite, best ashlar	500
Sandstone or limestone, best ashlar	400

17. Soft steel may be used with unit stresses ten per cent. less than stresses allowed for medium steel, but different grades of steel must not form parts of the same member. Soft steel.

18. Angles subject to direct tension must be fastened by both legs, otherwise the section of one leg only is to be considered effective. Angles fastened by both legs.

19. A member subjected to direct and bending stresses shall be so proportioned that the greatest fibre stress shall not exceed the allowable unit stress for tension or compression. Combined stress.

20. For long-span bridges, where the ratio of the length to the width of span is such that it makes the top chords acting as a whole, a longer column than the segments of the chords, the chord shall be proportioned for the greater length. Chords of long bridges.

21. The length of a compression member shall not exceed 100 times its least radius of gyration for main members, nor 120 times for laterals, struts and wind bracing. Length of compression members.

22. Compression flanges of beams and girders shall be of the same gross section as the tension flanges. Flanges.

23. Rolled beams shall be proportioned by their moments of inertia. Rolled beams.

24. The effective diameter of a driven rivet will be assumed the same as its diameter before driving. In deducting the rivet holes to obtain net section in tension members the diameter of the rivet holes will be assumed as $\frac{1}{8}$ inch larger than the undriven rivet. The rupture of a riveted tension member is to be considered as equally probable either through a transverse line of rivet holes or through a zigzag line of rivet holes, where the net section does not exceed by 30 per cent. the net section along the transverse line. The number of rivet holes to be deducted for net section will be determined by this condition. Net section.

25. Design, material and construction throughout shall be such that rupture will occur in the body of members rather than in any of their details or connections. Rupture.

General Construction.

26. Workmanship throughout shall be first-class and in accordance with the best practice of modern bridge construction. All parts shall be neatly finished. Workmanship.

27. All material is to be straightened in the shop before being laid off or worked in any way, by methods which will not injure it. Members, and the several pieces when formed into one member, shall be straight and free from twists or bends. Any material damaged in transit must be rejected when such damage consists of sharp kinks. Slow bends only may be rectified in the field, but in no case is the member to be heated for this purpose. The straightening of a built member will not be permitted after it has been riveted together. Twists and bends.

28. All parts of the structure shall be accessible for cleaning, painting and inspection; closed sections will not be allowed. Open construction.

29. All truss bridges are to be cambered by making each panel of the upper chord longer than the lower chord in the proportion of $\frac{3}{16}$ inch in 10 feet. Camber.

30. The ends of all square ended members shall be planed smooth and exactly square to the centre line of stress. Square ends.

Screw ends. 31. Bars having screw ends, where their use is expressly permitted by the engineer, shall be upset so that the minimum diameter through the threaded portion shall be 10 per cent. greater than any part of the body of the bar. The smallest section of any bar used shall be one inch diameter for round bars, and 7/8 inch square for square bars.

Welding steel. 32. No reliance will be placed on the welding of steel.

Shearing. 33. Shearing shall be neatly and accurately done.

Care in transportation 34. The material for the bridge in all stages of transportation, handling, and piling is to be kept clean, and injury from breaking, bending or distortion prevented.

Forked ends. 35. Ends of compression members forked to connect to the pins are to be avoided, if possible, but if permitted by the engineer, they must have a compressive strength equal to the body of the member.

Even bearings 36. Stringers are to be in a true horizontal plane, with a full and even bearing on all floor beams or masonry supports.

Clearance. 37. The necessary clearance is to be provided at expansion ends between shoe-plates, floor, and ballast wall.

Eccentricity. 38. Eccentricity shall be avoided in all parts of the structure. All parts working together as one member shall be uniformly stressed.

Batten plates and lattice. 39. The open sides of compression members shall be stayed by batten plates at the ends, and diagonal lattice-work at intermediate points. Batten plates shall be placed as near the ends as practicable and shall have a length not less than the greatest width of the member or 1½ times its least width.

Compression members. 40. The material in compression members must be concentrated principally at the sides in flanges and vertical webs. Cover plates shall have a thickness not less than one-fortieth ($\frac{1}{40}$) of the distance between rivet lines. The thickness of each web shall be not less than one-thirtieth ($\frac{1}{30}$) of the distance between its connections to the flanges.

Upper chords and end posts. 41. Upper chords and end posts of through trusses shall preferably be of box section type. Sufficient metal is to be concentrated at the bottom in order that the centre of gravity will be near the centre of the web-plates.

End members of through trusses. 42. In through trusses, the end posts are to be battered. End vertical suspenders, and two end panels of the lower chord will be rigid members.

Double members. 43. Members of lattice trusses and girders are to be double, and connected symmetrically to the webs of chords. Where it can be avoided, plates or flats alone are not to be used for tension members. In trusses, the counters, suspenders and two panels of the lower chord at each end are to be latticed; other tension members may be connected by batten plates or latticed.

Waterproofing. 44. Spaces where water can collect are to be drained. All stiffeners, fillers, splice-plates and riveted connections are to fit sufficiently close to prevent, when painted, the admission of water. Expansion aprons are to be supplied unless otherwise stated by the engineer.

Minimum thickness. 45. The minimum thickness of material to be used shall be $\frac{5}{16}$ inch except in lattice bars. The minimum angle shall be 2½ in. x 2½ in. x $\frac{5}{16}$ in., or 3 in. x 2 in. x $\frac{5}{16}$ in., except the bottom angles of hand-rails, which may be 2½ in. x 2 in. x $\frac{3}{16}$ in.

Rivets.

Diameter. 46. The rivets used shall generally be ¾ inch and ⅞ in. in diameter, smaller ones being employed for channel flanges and angle irons less than 3 in. wide. Rivets ⅞ in. diameter may be used in the flanges of beams 6 in. and 7 in. deep, ¾ in. rivets in the flanges of beams from 8 in. to 15 in. deep and ⅞ in. diameter rivets in the flanges of beams 18 in. deep and over.

Edge distance. 47. Rivets shall be not less than 1¼ inches from the edge of the metal through which it passes, except the rolled edges in shapes where the edge distance will be as great as the shape will permit. The maximum distance from the edge shall be eight times the thickness of the plate, but shall not exceed 3 inches.

Grip. 48. No rivet shall have a longer grip than five times its diameter.

Dies. 49. Dies shall not exceed the diameter of rivet by more than $\frac{1}{16}$ inch, and all holes must be clean cuts without torn or ragged edges.

Rivet holes. 50. Rivet holes shall be accurately laid off and punched in such a manner that, when the several pieces forming a member are bolted up, the holes will match accurately.

Drifting. 51. Drifting will not be allowed. Holes not matching must be reamed.

Driving. 52. Rivets must be power driven with direct acting machinery wherever practicable and field riveting must be reduced to a minimum. Hand driven rivets will not be allowed in the case of rivets exceeding ⅞ inch diameter.

Loose rivets. 53. Rivets must completely fill the holes, and no loose or badly formed rivets will be allowed nor any calking. They must have full round heads concentric over the shank of the rivet; be of a height not less than $\frac{6}{10}$ the diameter of the rivet, and be in full contact with the surface.

Burned rivets 54. Rivets must be heated uniformly throughout or with the heads hotter than the points. Under no circumstances shall rivets be driven with points hotter than the heads. Rivets must not be burned.

Rivets in direct tension. 55. Rivets shall in general not be used in direct tension. Should their use in direct tension be in any case permitted, their value shall be estimated by using a unit stress of ⅔ of the unit stress for material in tension as previously given.

Cutting out rivets. 56. In cutting out rejected rivets, the adjacent material must not be injured; if necessary the rivets shall be drilled out.

Pitch of rivets 57. The pitch of rivets in any class of work is not to be less than three diameters of the rivet; but shall be 2½ inches for ¾ inch rivets and 3 inches for ⅞ inch rivets; nor shall the pitch exceed 6 inches or 16 times the thickness of the thinnest outside plate. In angles with two rows of rivets staggered, the maximum pitch will be twice the foregoing in each row.

58. In tension members, composed of two angles in contact, a pitch of 12 inches will be permitted for riveting the angles together. At the ends of compression members, for a length equal to twice the width of the member, the pitch of rivets shall not exceed four diameters of the rivets.

Rivet lines. 59. The distance between rivet lines in plates subject to compression shall not exceed 30 times their thickness; except cover plates of top chords and end posts, in which the unsupported width shall preferably not exceed 40 times their thickness, but where a greater width is used for chords and posts, only 40 times the thickness shall be considered as effective section.

Plates in contact. 60. Where two or more plates are used in contact, they shall be held closely together by rivets not more than 12 inches apart in either direction.

Field rivets. 61. Holes for field rivets, except those for connections of the lateral and sway systems, shall be accurately drilled or reamed to a steel template, or be reamed true while the parts are temporarily fastened together.

Rolled I-Beam Spans.

System. 62. The depth of rolled I-beams used as longitudinal stringers shall preferably be not less than $\frac{1}{20}$ of the span; and when used as girders to support a floor system of floor beams and stringers, shall preferably be not less than $\frac{1}{12}$ of the span.

Sole-plates and bracing. 63. Rolled beam spans shall have planed sole-plates riveted to the flanges, and bolted through bed-plates to the masonry at one end and free to slide logitudinally at the other. They shall have rigid cross-struts and diagonal bracing riveted to the webs. There shall be stiffening angles at both ends with close fit to flanges; when in pairs they shall have wrought metal separators.

Holes. 64. Holes in tension flanges of beams shall be drilled in the middle half of the beam, and other holes in flanges or in webs may be punched.

Floor Beams and Stringers.

Spacing. 65. Stringers shall be of steel, spaced not more than 3½ feet centre to centre.

Attaching stringers. 66. Stringers will preferably be riveted to the web of floor beams, but if resting on the floor beams they shall be securely riveted to them. For bridges of Class B, when expressly permitted by the engineer, stringers may be bolted to the floor-beams, bolts to be of sufficient size to burr and batter if so directed.

Square ends. 67. The ends of floor beams and stringers shall be faced true and square and to exact lengths.

Connection angles. 68. Connection angles for floor beams and stringers must not be less than $\frac{7}{16}$ inch in thickness before planing; they shall be flush with each other and correct as to position and length of girder, but the necessity of planing more than $\frac{1}{16}$ from their thickness will be cause for rejection. Connection angles are to have a full complement of rivets.

Beams in pin and deck bridges. 69. Floor beams in bridges with pin connected chords, shall be riveted to the posts above or below the pins, and in deck bridges, preferably below the top chord. They shall, preferably, be square to the trusses or girders.

End floor beams. 70. Where end floor beams are not used, stringers resting on masonry shall have cross-frames near their ends, the frames to be riveted to girder or truss shoe where practicable.

71. Floor beams shall be effectively stayed against end motion or tendency to rotate from action of the lateral system. Floor beam to be stayed.

72. The use of floor beam hangers will be avoided where possible. When used they are to be rigidly attached to the trusses, and so arranged as to stay the floor beams against rotation or end motion. Hangers.

Lattice Bars.

73. The width of lattice bars shall be about three times the diameter of connecting rivets. The minimum width of lattice bars shall be 1½ inches for members 6 inches wide; 1¾ inches for members 9 inches wide; 2 inches for members 12 inches wide; 2¼ inches for members 15 inches wide; and 2½ inches for members 18 inches or more in width. Subject to a minimum thickness of ¼ inch, except for hand-rails, the thickness of single lattice bars shall not be less than $\frac{1}{40}$ of the distance between the rivets connecting them to the members, and double lattice bars connected by a rivet at the intersection, not less than $\frac{1}{60}$ of the distance. Width and thickness.

74. Single lattice bars shall make an angle of not less than 60 degrees with the axis of the members, and double lattice bars with riveted connections, an angle of not less than 45 degrees. Angle.

75. Double lattice shall be used on all members having a clear width between members of 20 inches or more, the bars to be connected by a rivet at the intersection. Double lattice.

76. Lattice bars shall be so spaced that the portion of the flange between their connections shall be as strong as the member as a whole. The pitch of lattice bars must not exceed the width of the channel plus 9 inches. Spacing.

77. Lattice bars shall have neatly rounded ends unless otherwise called for. Rounded ends.

Bed Plates, Shoes, etc.

78. Pedestals must be of approved design and must properly distribute the loads over the bearings or rollers. Bearing surfaces of base plates and vertical webs must be planed. Pedestals.

79. Under pedestals at both ends there must be bed plates or bearings of an approved form, of sufficient thickness to distribute the weight properly on the masonry; the minimum thickness for trusses to be ⅞ inch. Sheet lead at least ¼-inch thick is to be placed under bed-plates if required by the engineer. Bed-plates.

80. Bed plates and bearings must be fox-bolted to the masonry, fox-bolts for trusses to be not less than 1¼ inches diameter, and for girders or beams not less than ⅞ inch diameter, and to extend not less than 12 inches into the masonry. The contractor must drill all holes; furnish bolts, and set to place with Portland cement. Fox bolting.

81. Bridges of 80 feet span or less shall be secured at one end to the masonry, and the other shall be free to move longitudinally on smooth surfaces. Sliding plates.

82. Bridges exceeding 80 feet span shall have at one end a nest of friction rollers bearing on planed surfaces. Friction rollers.

83. Provision shall be made for variation from change of temperature to the amount of ⅛ inch in 10 feet. Slotted holes must be pro- Expansion.

vided in sliding plates long enough to prevent any possible shearing of the anchor bolts; the slotted holes to be covered by plate washers and to be large enough to take a piece of pipe around the bolt to screw against so that the washer will not bind on the sliding plate.

Design of rollers and bearings.

84. The motion of the rollers shall be efficiently guided, and construction shall, as far as possible, be such that the entrance of dirt will be prevented; that rollers and bearings will not retain water, and that they may be readily cleaned.

Size of rollers.

85. Rollers less than 3 inches diameter must not be used for spans under 150 feet long, nor rollers less than 4 inches for longer spans, and they shall be so proportioned that the pressure shall not exceed the roller unit stress previously specified.

Material.

86. Rollers must be turned, or cold rolled, high or machinery steel; but bearing plates must be of medium steel, with planed surface.

Bearings for two spans.

87. Where ends of two spans rest on the one pier or abutment, a continuous bed plate, not less than ½ inch thick shall extend under the two adjacent bearings; otherwise the two bearings must be rigidly fastened together.

End motion.

88. Expansion ends must be free to move longitudinally under any possible changes of temperature, but shall be firmly fixed against lifting or side motion.

Eye Bars.

Up-setting and forging

89. The heads and necks of eye-bars shall be of such dimensions as will develop the full strength of the bar. They shall be formed by upsetting or forging. Welding will not be allowed. Bars must be annealed after forging.

Boring pin holes.

90. The bars must be straight before boring, the pinholes to be in the centre of the head and on the centre line of the bar. An error in diameter of pinhole or calculated length of bar exceeding $\frac{1}{32}$ inch will not be allowed.

Bars in same panel.

91. Bars to be placed side by side in the same panel are to be bored in such manner that, when laid on top of one another, the pins will pass through the holes at both ends without driving. The bars of a set shall be laid symmetrically around the centre of pin and shall be as nearly parallel as possible, the maximum allowable inclination being limited to one inch in 16 feet.

Pins.

Length and attachment.

92. Pins are to be of sufficient length to give a full bearing for their connections. They shall be secured by solid nuts and washers, or chamfered nuts. The screw ends shall be of sufficient length to burr the threads. Members packed on pins shall be held against lateral movement.

Blooms.

93. Pins over 7 inches in diameter must be forged. Blooms for pins shall have at least three times the area of the finished pins.

Fitting pin holes.

94. Lateral pins, and pins of 6 inches diameter and upwards, shall fit the pin holes within $\frac{1}{32}$ inch, and pins of less diameter within $\frac{1}{50}$ inch.

95. Pins shall be turned straight and smooth, of a smaller diameter at the ends, and driven to place with a pilot nut. Turning and driving.

96. The several members attached to the pin shall be so packed as to permit the least bending moment upon the pin, all vacant spaces to be filled with wrought iron filling rings. Vacant spaces.

97. Standard hexagonal nuts shall be used, and if not recessed, a washer for adjustment shall be used under at least one nut. Nuts.

Pin Holes.

98. Pin holes must be exactly perpendicular to the plane of the truss. When necessary they shall be so reinforced by plates that the allowed pressure on the pins will not be exceeded, the plates to contain enough rivets to transfer their portion of the bearing pressure. At least one plate on each side shall extend six inches beyond the edge of the batten plates. Pin holes.

Bolts.

99. Bolts, when their use is expressly permitted by the engineer, must be of neat lengths; must have hexagonal heads and nuts, and when in contact with wood shall have a washer under the heads and nuts. Holes in members to be connected by bolts must be reamed parallel and the bolts turned to a driving fit. No thread shall come within the bolt hole. Bolts shall not be used in place of rivets. Bolts for connecting woodwork may be bolts with hemispherical heads, or ordinary carriage bolts. Bolts.

Splices and Connections.

100. Joints in riveted work whether in tension or compression, are to be fully and symmetrically spliced. Compression chords will be connected at the abutting ends by splices sufficiently strong to hold them in true position, and for their full strength except in the case of intermediate top chord splices, when the abutting ends may be considered to transfer 20 per cent. of the stress in the member. Joints to be fully spliced.

101. Abutting joints shall be cut or planed smooth, square to the centre line of strain, and fitted close together. In compression chord members, abutting joints shall be planed and faced so as to have full and even bearings after being riveted up in perfect alignment. Abutting joints.

102. Splices shall be of the same kind of material as the parts joined. Material.

103. Riveted tension members, with pin hole connections, must have through the pin holes, an effective section 50 per cent. greater than the net section area of the member, and the net section area back of the pin hole must be equal to the net area of the member. Effective section.

Portals and Bracing.

104. High truss bridges shall have latticed portals rigidly connected to the end posts and top chords, and as deep as the headroom will permit. Provision shall be made in the end posts for bending strains from wind pressure. Latticed portals.

Diagonal bracing.

105. Trusses exceeding 20 feet in height shall have an overhead system of diagonal bracing attached to each post and to the top lateral struts.

Knee braces.

106. Trusses 20 feet or less in depth shall have knee braces at each intermediate panel point, and connected to the vertical posts and top lateral struts.

Pony trusses.

107. Pony trusses and lattice girders shall be firmly stayed by knee braces or gusset plates extending from the top chords to the cross beams or the transverse struts.

Stiff bracing

108. Portal, lateral, and sway bracing must be rigid and of shapes and dimensions capable of resisting compression as well as tension, with riveted connections. Such bracing must be carefully tightened to take tension.

End laterals.

109. All bridges must have lateral struts at the ends unless the end floor beams act as such.

Sagging and rattling.

110. Members of the web, lateral, longitudinal or sway systems shall be securely riveted at their intersections to prevent sagging and rattling.

Hand Railings and Foot Walks.

Hand railings.

111. Hand or guard railings not less than 4 feet in height shall be placed on each side of the superstructure. They shall be strong and durable, of iron pipe or steel lattice, and rigidly attached and braced, and shall extend over piers and abutments as specified by the engineer.

Steel lattice.

112. The openings in steel lattice railings in the lower half of the fence shall not exceed 8 inches to a side, and the bottom rail shall be not more than 6 inches clear from the felloe guard. Lattice bars shall be inclined at an angle of 60 degrees to the horizontal, and shall have neatly rounded ends. There shall be a rivet at each intersection.

Top flange.

113. The top flange of railings shall be proportioned to withstand a transverse horizontal thrust of not less than 60 pounds per lineal foot. Hand rails shall be firmly supported laterally at panel points, and at such other points as may be necessary to maintain the strength of 60 pounds per lineal foot horizontally. On beam spans, hand railing shall be supported at intervals not to exceed twelve feet.

Concrete flooring and footwalks.

114. Concrete floors shall be of reinforced concrete, laid in accordance with approved specifications for concrete. Where footwalks are required they shall be placed outside the trusses and supported on longitudinal beams resting on overhanging steel brackets, and shall be proportioned throughout to a uniform live load of 100 pounds per square foot.

Newel posts.

115. Hand rails shall extend beyond the end of the steel superstructure, and shall be attached to iron or steel newel posts bolted to the wing walls, of design approved by the engineer.

Gas-pipe railing.

116. On through truss bridges without foot walks, gas pipe hand rails shall consist of not less than two lines of 1¼ inch gas pipe on both sides of the bridge, to be securely attached to verticals and diagonals of the truss. On deck or beam bridges, the top pipe and uprights of gas pipe railings shall be of not less than 2½ inch gas pipe, with globe connections.

Expansion.

117. Expansion joints must be provided in hand rails at the sliding ends of all spans.

Trestle Towers.

Bracing and anchorage.

118. Trestle bents shall preferably be composed of two supporting columns, two bents forming a tower; each tower thus formed shall be thoroughly braced in both directions and have struts between the feet of the columns. The feet of the columns must be secured to an anchorage capable of resisting one and one-half times the specified wind forces. Each tower shall have sufficient base, longitudinally, to be stable when standing alone, without other support than its anchorage.

Temperature allowance.

119. The lower struts must be capable of resisting all stresses due to temperature changes. Tower footings and bed plates must be planed on all bearing surfaces and the holes for anchor bolts slotted to provide for temperature movement.

Splicing joints.

120. Joints in tower columns are to be fully spliced to hold the parts accurately in position, and to resist all possible tension stresses.

Plate Girders.

Depth.

121. The depth of plate girders will preferably be not less than $\frac{1}{12}$ of the span, centre to centre of bearings.

Compression flanges.

122. The sectional area of the compression flange shall be not less than the gross sectional area of the tension flange, and shall be stayed against lateral deflection at intervals not exceeding 16 times its width.

Stress calculation.

123. The depth for calculation will be the distance between centres of gravity of the flanges, unless this exceeds the distance from back to back of angles, in which case the latter dimension will be used. Chord stresses are to be resisted by the upper and lower flanges, and shearing stresses by the web plate, but one-eighth of the gross area of the web plate may be estimated as flange area.

Flange plates.

124. Heavy sections of angles are to be used with as few cover plates as possible. When flange plates are used, at least one-half of the flange section shall preferably be of angles. Exposed plate girders shall have one flange plate extending the full length of the girder; other plates shall extend at least two rows of rivets at each end beyond their theoretical length.

Web-plates.

125. Webs of plate girders shall, if possible, be in one piece, but where this is not practicable they shall be fully spliced for maximum shear at the splice, and sufficient to transfer bending stress in that part of the web estimated as flange area. Web plates may be set in from the backs of angles $\frac{1}{8}$ inch except in girders without cover plates, where they shall be flush with the backs of the angles.

Rivets connecting flanges.

126. Rivets connecting the web and flanges shall be sufficient in number to transfer the increase in flange stress between any two points, together with any load applied directly to the flange.

Stiffeners.

127. When the unsupported distance between the flange angles exceeds fifty times the thickness of the web, vertical stiffeners of angles shall be placed on each side of web.

Spacing.

128. The stiffeners, in girders over four (4) feet in depth, are to be placed a distance apart, centre to centre, not exceeding the depth of the full web plate.

In girders under four (4) feet in depth they may be placed four (4) feet apart.

If unequally spaced the distance between them will gradually decrease towards the ends.

Concentrated loading.

129. Stiffeners will be placed at all points of concentrated loading.

Stiffeners at end bearings.

130. Over the end bearings, at each end of bed plates, there shall be two pair of stiffeners upon fillers, the projecting legs of which shall be as wide as the flange angles will permit. These stiffeners, including fillers, shall be proportioned to resist the maximum shear, as a column, considered one-half the depth of the girder in length. The rivet connection of the web shall be proportioned, at unit stresses, to transfer the total shear to the column.

Fillers.

131. Fillers, under stiffeners, shall be the same thickness as flange angles and as wide as stiffeners.

Intermediate stiffeners.

132. Intermediate stiffeners shall be of the following dimensions:

For	webs	3	feet	and	under	3″	x	2½″	x	⅜″ angles.
“	“	4	“	“	“	3″	x	3″	x	⅜″ “
“	“	5	“	“	“	3½″	x	3½″	x	⅜″ “
“	“	6	“	“	“	3½″	x	4″	x	⅜″ “
“	“	7	“	“	“	3½″	x	5″	x	⅜″ “

Contact.

133. Ends of stiffeners shall be made to come to as close a fit under flanges as possible without buckling flanges. Where close contact is specified the ends of the stiffeners shall be faced and shall have a full bearing with the flange angles.

Rivet pitch.

134. The rivet pitch of stiffeners shall not exceed five (5) inches.

Steel.

Manufacture.

135. All steel must be manufactured by the open hearth process, either basic or acid, and must be uniform in character for each specified kind.

Finished Material.

136. Finished material shall be perfect in all its parts, and true to section, must be free from injurious seams, ragged edges, flaws, blisters, cracks, or other defects, and must have a clean, smooth finish.

Blooms, billets or slabs shall not show surface defects, flaws or blow holes.

Fractures.

Plates thirty-six inches in width or under, shall have rolled edges.

137. All sample or full size pieces shall be tough and ductile, incapable of tempering, and must show uniform silky fractures, fine-grained, of a blue-grey color, without fiery lustre, or blackish cast, and free from granular spots and coarse crystals.

Chemical requirements.

138. Maximum limits of chemical impurities shall be as follows:

Phosphorous in acid open hearth steel, 0.08 of one per cent., except in rivet steel, which shall not contain in excess of 0.04 of one per cent.

Phosphorous in basic open hearth steel, 0.04 of one per cent.

Sulphur in acid and basic open hearth steel shall not exceed 0.05 of one per cent.

Manganese in open hearth steel, 0.60 of one per cent., except steel castings, which may contain 0.80 of one per cent.

In the case of analysis made from the finished material, the above allowed limits of sulphur and phosphorous may be exceeded by 25 per cent.

Tensile strength.

139. The minimum ultimate tensile strength for medium steel shall be 55,000 pounds per square inch; for soft steel, 48,000 pounds; for high steel, 80,000 pounds; for cast steel, 65,000 pounds. Maximum ultimate tensile strengths are to be 65,000 pounds, 58,000 pounds, and 100,000 pounds per square inch for medium, soft and high steel, respectively.

Elastic limit.

140. The elastic limit of steel shall be not less than one-half the ultimate tensile strength.

Elongation.

141. The minimum elongation per cent. in inches shall be 1,400,000, divided by the ultimate tensile strength.

Modification in elongation.

142. For material less than $\frac{5}{16}$ inch and more than $\frac{3}{4}$ inch in thickness, the following modifications shall be made in the requirements for elongation:

(*a*) For each increase of $\frac{1}{8}$ inch in thickness above $\frac{3}{4}$ inch, a deduction of 1 per cent. shall be made from the specified elongation, except that the minimum elongation shall be 20 per cent. for eye-bar material and 18 per cent. for other structural material.

(*b*) For each decrease of $\frac{1}{16}$ inch in thickness below $\frac{5}{16}$ inch, a deduction of 2½ per cent. shall be made from specified elongation.

(*c*) In rounds of $\frac{5}{8}$ inch or less in diameter, the elongation shall be measured in a length equal to eight times the diameter of section tested.

(*d*) For pins made from any of the before-mentioned grades of steel, the required elongation shall be 5 per cent. less than that specified for each grade, as determined on a test piece, the centre of which shall be one inch from the surface of the bar.

Bending tests.

143. Specimens of medium steel when heated to a cherry red and cooled in water at 75 degrees Fahrenheit shall be capable of bending 180 degrees around a circle whose diameter is equal to the thickness of the test piece, without showing signs of cracking on the convex side of the bend. Specimens of rivet and soft steel similarly heated shall be capable of bending cold 180 degrees and closing down flat upon themselves without cracking. Bending tests shall preferably be made by pressure rather than by hammering.

Drifting test.

144. Punched rivet holes in medium steel, pitched two diameters from a sheared or rolled edge, must stand drifting until their diameters are 50 per cent. greater than those of the original holes without signs of cracking the metal.

Soft steel.

145. Soft steel which satisfies the drifting test need not be reamed.

Variation in weight.

146. Variation of more than 2½ per cent. above or below the specified weight or dimensions of material may be cause for rejection.

Annealing.

147. All members partly heated in working shall be carefully annealed.

Temperature of working.

148. No forging shall be done under red heat.

Angles.

149. Angles ¾-inch or less in thickness shall, cold, open flat without fracture.

Inspector.

150. An inspector may be appointed by the engineer for mill and shop inspection. The engineer or inspector shall at all times have full access to the mills and shops where material under inspection is being manufactured.

Testing.

151. The contractor shall supply at his own cost, from each melt, at

least one bending and one tension piece, and such drifting test pieces as the inspector may require; also the labor and tools necessary to make the tests; and if the requirements are not complied with, such additional test pieces as the inspector may deem necessary.

Analysis. 152. Chemical requirements shall be determined from a test ingot taken at the pouring of each melt of steel, and a correct copy of analysis shall be furnished the engineer or his inspector.

Rollers and pins stamped. 153. Steel for pins and rollers shall be stamped on the end. Rivet and lattice steel and other small parts may be bundled with them and the stamp marks on an attached metal tag.

Melt numbers 154. Melt numbers and the name of the manufacturer shall be clearly marked on all finished material rolled from the melts.

Test pieces. 155. Test pieces shall be of such dimensions and shall be cut from the finished material in such manner as the engineer or inspector appointed by him may require.

Stock material. 156. When the material used is taken from shop stock, it shall be free from pitting and rusting, and shall have been protected in such manner as will fully maintain its strength and durability.

Rejected material. 157. Material which does not pass the specified tests shall be rejected. Acceptance at the mill or shop shall not prevent subsequent rejection, should defects be developed.

Steel castings. 158. Steel castings shall be made of acid open hearth steel, must be sound and free from blow holes, true to pattern and smooth in finish. Steel castings shall be uniformly annealed.

Iron castings. 159. Iron castings must be of tough grey iron, free from cold shuts or injurious blow holes, true to form and thickness, and of workmanlike finish. Sample pieces, one inch square, cast from the same heavy metal in sand moulds, shall sustain a central load of 500 pounds on a clear span of 4½ feet when tested in the rough bar. A blow from a hammer, on a rectangular edge of the casting, shall produce an indentation without flaking the metal.

Timber.

Timber. 160. Timber unless otherwise specified shall be first-class oak, white pine, red or Norway pine, spruce, tamarac or cedar. It shall be sawn true and out of wind, free from wind shakes, large or loose knots, decayed or sap wood, worm holes or other defects impairing its strength or durability, and shall be properly seasoned.

Painting.

Shop painting. 161. All metal before leaving the shop shall have loose scale and rust thoroughly removed, and be given a shop coat of paint, which must be worked into all joints and open spaces. The shop paint must be dry before loading on the cars.

162. Surfaces in contact with one another shall each be painted before being riveted together.

163. All surfaces that will not be accessible after erection shall receive two coats of paint, the metal to be perfectly cleaned before painting.

164. All machinery surfaces shall be coated with white lead mixed with tallow before shipment.

Painting after erection.

165. After erection all rubbed spots and field rivets shall be carefully cleaned and painted. When dry, the entire metal work shall be thoroughly and evenly painted with two additional coats of paint of different shades. Recesses which might retain water, or through which water could enter, must be filled with thick paint or waterproof cement before the final coat of paint is applied. Field rivets are to be given one coat of approved paint on the day they are driven. Painting will not be allowed in wet or freezing weather. The steel, when paint is applied, must be dry.

Standard paint.

166. Unless otherwise specified, previous to the signing of the contract, the paint used shall consist of red lead, lamp-black, and pure raw linseed oil. The shop coat shall contain 12 pounds of red lead, 8 ounces of lamp-black, and one gallon of linseed oil; the first field coat to be 15 pounds of red lead, 10 ounces of lamp-black and one gallon of linseed oil; and the final coat to be 15 pounds of red lead, 13 ounces of lamp-black and one gallon of linseed oil. Each coat is to be thoroughly dry before the next is applied. The red lead and lamp-black shall first be mixed dry, the linseed oil added, and the mixture stirred to a uniform consistency, and maintained at such consistency by frequent stirring during application. Only a sufficient quantity for immediate use shall be mixed at once. Thinning and drying ingredients will not be allowed.

Proprietary paints.

167. Where paint other than that described in this specification is used, it shall comply with such tests as may be prescribed by the engineer, in addition to the following:

Fineness.

168. Fineness of pigment and covering power will receive special consideration, and comparison of fineness shall be made in the following manner: The paint having been first brought to a temperature of about 70 degrees Fahrenheit, and then thoroughly stirred up, a single drop will be allowed to fall upon a horizontal clean sheet of glass. The glass will then be placed in a vertical position for one hour, at the expiration of which no separation of pigment from vehicle should be noticeable.

Drying.

169. Paint will not be accepted, the ordinary coating of which, when spread on glass, dries dust-proof in less than 10 hours, or more than 14 hours.

Consistency.

170. The paint should be of a proper working consistency, not too heavy to be brushed out without additional thinning, not thin enough to cause it to run, and must cover iron surfaces thoroughly with two coats.

171. Shipments will be subject to test at all times, and any failing to meet the requirements of this specification shall be returned to the shipper, who will pay freight both ways.

Guarantee.

172. The manufacturers or contractor will be required to guarantee that if the paint furnished cracks, flakes or powders within two years of date of application, they will furnish sufficient standard paint, free of charge, to repaint the work.

General Conditions.

Inspection.

173. The contractor shall, free of cost, furnish all facilities and test pieces for the inspection and testing of materials and workmanship. Inspection of the work done shall not relieve the contractor of his obligation to furnish proper material and perform sound and reliable work.

Falsework.

174. Unless otherwise specified, the contractor shall furnish all falsework and staging, shall erect and adjust all metal work, and shall put in place all flooring, guards, railings, attachments, etc., complete, to the lines and grades furnished by the engineer. The contractor shall furnish all material incidental to or in any way connected with the manufacture, erection and maintenance of the structure until its final acceptance by the municipality. He shall assume all risks from floods, storms and casualities of every description.

Interference with travel.

175. The contractor shall at all times carry on the work in such a manner as not to interfere with travel more than is absolutely necessary for the faithful performance of the work, and shall not obstruct any thoroughfare by land and water except by written order of the engineer.

Refuse material.

176. On the completion of the work all surplus or refuse material, falsework, piling or other obstructions shall without unnecessary delay be removed by the contractor. If not removed within forty-eight hours after notice in writing so to do from the engineer, it shall be removed by the engineer at the contractor's expense.

Prevention of accident.

177. The contractor shall during the progress of the work use all proper precautions by good and sufficient barriers, red lights, or watchmen, for the prevention of accident, and he shall indemnify and save the municipality from all suits and actions and all costs and damages occasioned by the negligence or carelessness of the contractor, or his agents or employees.

Interpretation of specifications.

178. The decision of the engineer shall be final in case of ambiguity in the plans and specifications or doubt as to the correct interpretation thereof.

Disorderly employees.

179. Any disorderly or incompetent person or persons who may be employed on the work shall be removed when required by the engineer, and no person so removed shall thereafter be employed upon any portion of the work.

Inspection of material.

180. All material used in the work, or any portion thereof, included under this contract, shall be subject to the inspection and approval of the engineer. The supply of each and all material or materials must be so gauged that a sufficient quantity will be kept on hand by the contractor to allow ample time for testing and examination by the engineer without delay to the work of construction.

Rejected material.

181. All material rejected by the engineer shall be immediately removed from the site of work by the contractor. In case the contractor should refuse to remove or replace any rejected work or material within forty-eight hours after written notice, such work or material shall be removed by order of the engineer at the contractor's expense.

Defective work or material.

182. Any defective work or material that may be discovered by the engineer before the final acceptance of the work, or before final pay-

ment has been made, shall be removed and replaced by work and material which shall conform to the spirit of the specification; all loose rivets shall be immediately cut out and re-driven to the satisfaction of the engineer; failure or neglect on the part of the engineer to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials.

Notices by contractor.

183. All necessary notices to waterworks, gas, electric light, telephone or telegraph officials, owners or occupants of property, or other interested parties, shall be given by the contractor.

Payment of workmen.

184. The contractor shall punctually pay the workmen employed on the work comprised in these specifications, in cash current, and not what is denominated as "store" pay. And final payment for the work shall not be made until satisfactory vouchers are furnished the engineer by the contractor, showing all wages and accounts for materials and implements used in the work to have been paid.

Unforseen loss.

185. All loss arising from unforeseen obstruction or difficulties encountered in the performance of the work under these specifications, or from delay or hindrance from any cause during the prosecution of the same, shall be sustained by the contractor.

Abandonment of contract.

186. Should the work under contract be abandoned by the contractor, or should at any time the engineer judge and certify in writing that the said work, or any part of it, is unnecessarily delayed, or that the contractor is violating any of the conditions or covenants of this contract, or is executing the same in bad faith, then in that case, the engineer shall notify the said contractor to discontinue all work under this contract. The municipality may employ other parties to complete the work in such manner as they may decide, and use such materials as may be procured upon the site of the aforesaid work, and if necessary may procure other material for its completion, and charge the expense of the said labor and material to the contractor, which expense shall be deducted from any moneys due him under contract. In case these expenses shall exceed the sum which would have been payable under contract, if the same had been completed by the said contractor, he or his bondsmen shall pay the amount of the excess to the municipality upon notice from the engineer.

Stopping work.

187. The engineers may stop any portion of the work if, in their judgment, the weather is such to prevent the same being done properly. No allowance of any kind will be made for such stoppage, except an extension of the time for the completion of the work as herein provided.

Extension of time.

188. An extension of time may be granted by the engineer in the event of the work being delayed beyond the prescribed time for completion resulting from delays caused by carriers, or the elements, general strikes, accidents or other causes beyond the contractor's reasonable control.

Methods and appliances.

189. The contractor is to use such methods and appliances for the performance of all the operations connected with the work embraced under this contract, as will secure a satisfactory quality of work, and a rate of progress which will secure the completion of the work within the time specified.

Assignment of contract.

190. The work to be performed under this contract, or any part

thereof, or any money or orders payable under this contract, shall not be assigned nor sub-let by the contractor without the pre-sanction of the municipality. No sub-contract shall under any circumstances relieve the contractor of his liabilities and obligations under this contract. Should any sub-contractor fail to perform the work undertaken by him in a satisfactory manner, and should this provision be violated, the municipality may, at their option, end and terminate such contract.

Alteration in plans and specifications.

191. Should any changes or alterations in these specifications or plans in connection therewith be at any time deemed necessary by the engineer, he shall have authority to make such changes or alterations, and, unless otherwise provided for in writing, an amount proportionate to the prices contained in the tender upon which the contract was awarded shall be added to or deducted from the original amount of the contract.

Instructions to contractor.

192. The contractor, or his duly authorized agent or foreman, shall at all times while the work is in progress be on the ground, and instruction given by the engineer to such agent or foreman shall be of the same effect as if given to the contractor.

Engineer defined.

193. The word "engineer," where and whenever used herein, refers to the engineer or his authorized assistant, acting for or appointed by the municipality, to have charge and oversight of the work; and the words "approved" or "approval" shall mean the approval of the engineer.

Contractor defined.

194. The word "contractor" wherever used herein, refers to the party or parties contracting to supply the material and perform the work to be done under this contract, or the legal representatives or representative of such party or parties.

Municipality defined.

195. The word "municipality" wherever used in these specifications shall mean the municipal corporation purchasing the bridge, or the council of such municipality, or the warden, or the committee, or other person or persons duly authorized by the municipal council to act on behalf of such municipality.

SHORT FORM FOR BRIDGE SPECIFICATION.

A general specification for bridges can only be general, and cannot provide for special conditions, nor definitely decide as to alternative forms of construction. Each bridge should be treated on its own merits and should have the study and oversight of an experienced engineer, who can determine and fix the plans and details to be followed.

The following short form of bridge specification is submitted as an example of the type of specification to be prepared by the local engineer and used in conjunction with the general specifications in this report.

Bridge Specification.

The work comprised under this specification includes the supplying of material, building and erecting, complete and ready for concrete floor, of a steel highway bridge over the River ————, in the ——— Concession, opposite Lot —— in the Township of ———— in the County of ————, and Province of Ontario.

The bridge shall consist of a single span through bridge, with riveted connections; shall have steel lattice railings and a concrete floor.

The bridge will be erected on concrete abutments, built by the municipality, which are —— feet, face to face, without skew, and with bridge seat as shown on the plan hereto attached. The bridge is in all respects to comply with the last revised General Specifications for Steel Highway Bridges, approved by the Engineer of Highways for Ontario, as relating to the material, loads, calculations, and unit stresses, proportioning material, painting, and all other details of construction necessary to fully complete the bridge in a satisfactory manner, which shall be considered a part of this specification, and shall be binding on the contractor.

The general conditions, as set forth in the above mentioned specifications of the Engineer of Highways for Ontario, shall also be considered a part of this specification and shall be binding on the contractor.

The contractor shall furnish complete data and plans, showing side and end elevations, strain and section sheets, upon which shall be given the stresses in the several members, areas required and sections to be used, together with detail shop and working drawings, all of which shall be approved by the engineer before the work is commenced.

The engineer will notify the contractor as to the date when the abutments will be in a fit condition to receive the bridge, and the contractor shall fully complete the said work as above provided for within —— days from said date.

All work shall be subject at all times to the inspection and approval of the engineer, and the work is to be completed to his satisfaction. Before final acceptance, the engineer may make a thorough test by resting the maximum loads upon the structure for twelve hours, or by passing over the structure the specified load or other equivalent. After such tests the structure must return to its original position without showing permanent change in any of its parts.

The bridge is to be more specifically constructed in accordance with the following particulars:

(1) Design of bridge, to be a low warren truss.

(2) Loading to be in accordance with Class "A" of the General Specifications of the Engineer of Highways, 1911.

(3) Upper chords and end-posts are to be built shapes consisting of steel channels with cover plates.

(4) Clear width of roadway is to be 16 feet, and of sidewalks 4 feet.

(5) Lateral bracing is to be of angles with riveted connections.

(6) Stringers are to be riveted to the upper flange of floor beams. No bolts will be allowed in the bridge.

(7) Special castings will not be required except for newel posts of handrail.

(8) A concrete floor is to be built by supplementary contract, also the filling and grading of approaches.

(9) The contractor will furnish information as to the paint to be used, and samples for testing if required, all of which will be subject to the approval of the engineer.

(10) Handrailing is to be of steel lattice, riveted at intersections, and extending, fully latticed a distance of ten feet beyond the face of the wing at each end of the bridge. Provision is to be made for expansion and contraction, and ends are to be attached to newel posts of ornamental design, embedded in the concrete wing walls, in holes provided for that purpose.

(11) An expansion apron is to be provided for the movable end of the bridge.

A marked cheque for five per cent. (5%) of the amount of the tender made payable to the Treasurer of the Municipality must accompany each tender as a guarantee of good faith, and will be forfeited to the municipality should the contractor to whom the contract is awarded fail to enter into a satisfactory agreement for the performance of the work. Cheques of unsuccessful bidders will be returned upon the agreement being duly completed.

The cost of masonry and other attendant work will be considered in comparing the amounts of the several tenders.

The lowest or any tender shall not necessarily be accepted.

SPECIFICATIONS FOR CONCRETE STRUCTURES.

1. All work under these specifications should be in accordance with approved plans and drawings showing details of reinforcement, character of foundation and fill, high and low water levels, and all information necessary to the understanding and analysis of the said plans. Plans.

2. The general type of concrete bridge shall preferably be as follows, but it is understood that the limiting lengths are not absolute, and may be varied as occasion permits: Design.

(1) A concrete arch, or concrete abutments with slab covering for spans up to 16 feet.

(2) A concrete arch, or concrete beam bridge for spans from 16 feet to 40 feet.

(3) A concrete arch for spans exceeding 40 feet in length.

(4) All concrete structures will preferably be reinforced, using medium steel.

3. All parts of the concrete structure shall be proportioned so as not to exceed the following unit stresses in pounds per square inch for stone or gravel concrete:— Unit stresses.

Extreme fibres of beams and slabs for bending	650	Compression.
Columns whose length does not exceed 15 times the least width	500	
Hooped columns, whose length does not exceed 15 times the least width	650	
Shearing stress in concrete	60	Shearing.
Bond between plain steel and concrete	60	Bond.
Bond between deformed steel and concrete	100	
Tension in soft steel	14,000	Tension.
Medium steel, tension	16,000	
High steel, one half the elastic limit, but not exceeding	20,000	

4. Reinforced concrete beams and slabs will be designed on the assumption that compressive stresses vary directly as the distance from the neutral axis. Assumptions.

No allowance will be made for concrete in tension.

The ratio of moduli of elasticity for steel and concrete will be assumed as 15.

All calculations will be based on concrete having a crushing strength of 2,000 pounds per square inch in 28 days.

5. The bearing strength of soils under foundations shall if possible be based on actual test, but where this is impracticable, the following shall be used: Foundations.

Rock in thick beds	25 tons per square foot
Strong gravel and coarse sand, dry	8 " " "
Compact sand or firm clay, dry	4 " " "
Clay, moderately dry	2 " " "
Clean, dry sand, not cemented	2 " " "
Wet clay	1 " " "
Quicksand and wet, yielding soils	0 to ½ " " "

Piling.

6. The safe bearing power of wooden piling shall be determined by the following formula:

$$P = \frac{2 \times W \times H}{S + 1}$$

Where P = safe load in pounds.
W = weight of hammer in pounds.
H = fall of hammer in feet.
S = penetration of last blow in inches.

Loading.

Dead load.

7. Each structure shall be designed to carry the following loads:

(1) A dead load consisting of the total weight of concrete, steel and other material therein, including the weight of earth or other superimposed filling; the weight of concrete to be assumed at 150 pounds per cubic foot, and earth fill at 100 pounds per cubic foot.

Uniform live load.

(2) A uniform live load expressed in pounds per square foot of floor surface, covering the whole or any part of the bridge.

Concentrated live load.

(3) A concentrated live load expressed in tons, passing over any portion of the bridge, on two axles at 10 feet centres and 6 feet gauge, two-thirds of the load to be carried on the rear axles.

Floor slab load.

(4) For floor slabs, a concentrated load expressed in pounds, midway between stringers or beams, and resting on a base one foot wide.

Classification.

8. Bridges will be classified according to loading as follows:

(*a*) Bridges suitable for main county roads.

(*b*) Bridges suitable for light country traffic.

(*c*) Bridges suitable for heavy and concentrated traffic.

	Uniform live load. Lbs. per square foot.	Concentrated live load.	Floor stress. Pounds.
Class A	100	15 tons	3,000
Class B	100	10 "	3,000
Class C	135	20 "	4,000

Proportioning Parts.

Lengths for calculation.

9. For calculating stresses the length of span for arches shall be the span of the neutral axis measured where it intersects the springing of the intrados, and for concrete beams and slabs shall be the distance centre to centre of bearings.

The rise of arches shall be the vertical distance from the springing point of the intrados to the neutral axis of the crown.

Arch loads.

10. Reinforced concrete arches shall be proportioned by the method of analysis based on the elastic theory of the arch, to carry the live loads specified. At least two conditions of live load must be assumed, the live load covering the entire arch, and covering one-half the arch.

Arch rings not reinforced.

11. The line of pressure in arch rings of plain concrete shall pass within the middle third of the ring.

Reinforced Arch rings.

12. Reinforced arch rings shall be reinforced with at least one-half of one per cent. of steel at the crown, and preferably one per cent. shall be used. At all points there shall be sufficient steel to resist the bending moment without reliance on the surrounding concrete.

13. All slabs, beams and girders of monolithic reinforced concrete construction shall be considered to be partially continuous, and shall have an amount of reinforcing in the upper part of the beam, at the supports, equal at least to one-half that in the lower part of the beam at the section of maximum positive moment. Concrete slabs and beams.

14. For partially continuous concrete beams and slabs, the maximum positive bending moment shall be taken at $\frac{9}{10}$ the corresponding moment as determined for simple beams, and the maximum negative moment at intermediate supports shall be taken at one-half the maximum positive moment. Bending Moment, Beams.

15. The width of slab to be considered as flange area shall not exceed 4 times the thickness of the slab, nor twice the thickness of the stem of the beam, nor one-half the span of the slab. "T" Beams.

16. Concrete for "T" beams should be so poured that there will be a perfect union between the beam and the slab; but where this cannot be done, steel stirrups must be used to take the entire horizontal shear. Casting "T" Beams.

17. When the horizontal shear in beams or slabs exceeds the allowable unit stress in concrete, such excess shear and any diagonal tension shall be provided for by the use of steel stirrups, such reinforcement to be placed at distances apart not exceeding the depth of the beam. Horizontal shear.

18. Beams or girders must be such that vertical shear will be taken by the concrete without reliance on the steel reinforcement, unless the steel itself will take the shear without reliance on the surrounding concrete. Vertical shear.

19. The unsupported length of any column shall not exceed fifteen times the least width. Columns.

20. Bending in columns due to any eccentricity of vertical loading must be provided for by increasing the section until the maximum stresses are not exceeded. Eccentric loading.

21. Columns shall have longitudinal reinforcement, the total area of which shall be not less than one per cent., of the area of the concrete, the bars to be straight, having sufficient lateral support to hold them securely in place until the concrete is placed, and so arranged as to make the column capable of resisting flexure. Longitudinal reinforcement

22. The effective area of a hooped column shall be the area within the protective covering, except in the case of columns reinforced with structural shapes, when the area wholly within the structural shapes shall be taken. The area of hoopings is to be not less than one per cent. of the vertical section, the clear spacing of bands or hoops not greater than one-eighth the diameter of the enclosed column, and so held in place that the core of the enclosed column is straight and well centred. Hooped Columns.

23. At the bases of columns, longitudinal reinforcement shall abut squarely on bearing plates, or shall be carried into the footing a sufficient distance to develop the unit compressive stresses elsewhere specified. Base of columns.

Footings.

24. Reinforced concrete footings are to be deep enough to transmit the vertical column loads by shear on the concrete alone, without reliance on reinforcing rods.

Splicing reinforcement.

25. Longitudinal reinforcing rods in columns shall be properly butted or spliced, and when any reinforcement is spliced by lapping, the unit bond stress between concrete and steel shall not be exceeded by the stress in the steel at the point of splicing; or a connection of adequate strength to carry the stress may be made between the bars. Splices are to be avoided at points of maximum stress.

Retaining walls.

26. The amount of earth pressure on retaining walls shall be estimated on the basis of one-half the weight of the material between the vertical and the plane of repose, which weight shall be assumed to act at the top of the bottom one-third of the height of the wall. When any superimposed load is carried between a plane, bisecting the plane of repose and the vertical, the weight of such load shall be added to the amount of earth pressure.

Expansion and temperature stresses.

27. The range of temperature assumed in the designing of arch rings shall be $\pm$ 50° F. Expansion joints should be placed in walls and footings at intervals not exceeding 40 feet; also in the spandrel walls of arches at the haunches and the crown, but special steel reinforcement may preferably be employed to resist temperature stresses. Expansion joints are to be so keyed as to prevent lateral displacement.

Length of rods.

28. Reinforcing rods are to be attached to proper anchor plates, or are to be of sufficient length to develop the full stress in the rods without exceeding the allowable unit stresses for bond between concrete and steel.

Spacing of steel.

29. The lateral spacing of bars should not be less than three diameters, centre to centre. All steel in slabs shall be protected by a covering of at least one inch, and in beams, arches, columns and walls, by at least two inches. Below grade or below water level, steel shall have a covering of at least four inches of concrete.

Proprietary materials.

30. Structures or parts of structures in which are used patented or proprietary materials, or systems not capable of exact or satisfactory analysis, shall have a safety factor of four, after 30 days, based upon actual test.

Drainage and waterproofing.

31. Arch rings and slabs carrying earth fills are to be properly drained and water-proofed. Weep-holes are to be suitably placed in retaining walls and abutments.

Materials.

Portland Cement.

32. Cement must be of a favorably known brand of Portland cement, approved by the engineer in charge of the work, and complying with the requirements and tests of the Canadian Society of Civil Engineers

for Portland Cement. It shall be delivered in suitable receptacles and carefully protected from dampness by proper storage. The packages shall not be laid on the ground, but shall be placed on boards raised a few inches from it.

Fine aggregates.

33. Fine aggregates shall consist of sand, crushed gravel or stone screenings, passing when dry a screen of one quarter inch mesh; and not more than 6 per cent. passing when dry a screen having 100 meshes to the lineal inch. The material shall be clean, sharp, silicious, and of varying sized grain.

Broken stone.

34. Broken stone shall be granite, trap, quartzite, fine-grained limestone, or other equally strong and durable stone, care being taken to exclude soft limestone, friable sandstone, and stone affected by the atmosphere. The stone is to be clean and free from clay, loam, or other earthy material. The size shall be such as is retained on a one-quarter inch mesh, and in largest dimensions will flow readily around the reinforcement, but will not separate from the mortar in laying.

Gravel.

35. Gravel, if used in its natural state in making "fine" concrete, shall be of uniform character and of varying sized grain, making a dense and compact mass, such that the smaller particles will fill the voids between the larger, the largest stones therein to be such as will flow readily around the reinforcement but will not separate from the mortar in laying. Gravel shall be clean and free from earthy mould or organic matter. Should there be insufficient fine material to properly fill the voids and make a compact mass, the deficiency shall be corrected by the addition and mixing of such quantity of sand, and in such manner as may be required by the engineer or inspector in charge of the work. Should the gravel to be used contain an excessive amount of sand, loam, large stones, or other objectionable material, it shall be screened through a mesh of proper size. Where the sand and fine stuff is thus removed the resulting mass of pepples shall be treated as broken stone, and sand shall be mixed therewith in the manner herein described for broken stone concrete. Where large stones only are removed the material shall be treated in the ordinary manner for gravel concrete.

Metal.

36. The steel used for reinforcement shall have an ultimate strength of not less than 55,000 pounds per square inch, and must bend cold 180° to a diameter of the thickness of the piece tested without fracture. Steel is in general to comply with the requirements for steel as stated in the specifications for steel bridges prepared by the Engineer of Highways. Before use, the metal must be clean and free from loose scale or rust, and is to be free from oil, paint, or other material that will prevent adhesion of the concrete. Welding will not be allowed except on express permission of the engineer, and at points where the metal is least stressed.

Water.

37. The water used is to be clean, and the mixture must be sufficiently wet to flow into the forms and around the reinforcement without permitting the separation of the coarser aggregates from the mixture in conveying from the mixer to the forms.

Fine and rubble concrete.

38. Concrete referred to in this specification shall be known as "fine concrete" and "rubble concrete," the former to consist of a mixture of gravel and cement, or of broken stone, sand and cement; the latter to consist of fine concrete with large stones imbedded therein. Unless rubble concrete is definitely specified, fine concrete shall be used.

Weight of cement.

39. For the purposes of this specification, the weight of Portland cement shall be assumed to be 100 pounds per cubic foot.

Proportioning Materials.

Proportions of gravel, sand and cement.

40. The proportions of materials to be used in mixing fine concrete shall be by measure, loose, and, unless otherwise directed by the engineer, shall be as follows:—

Gravel Concrete.

(*a*) Abutments, piers, and wing walls: One part of cement to seven parts of gravel.

(*b*) Arches from the springing line, floor slabs, beams, columns and parapet walls: One part of cement to five parts of gravel.

Broken Stone Concrete.

(*c*) Abutments, piers, and wing walls: One part of cement, three parts of sand, and six parts of broken stone.

(*d*) Arches from the springing line, floor slabs, beams, columns, and parapet walls: One part of cement, two parts of sand, and four parts of broken stone.

Proportion for density.

41. The proportioning of materials may be varied by the engineer from the foregoing, on the basis of voids in the aggregates, to secure a compact mixture, but the amount of cement is also to be determined by the strength of mortar required. In no case is less cement to be used than is needed to fill the voids in the sand or fine aggregates when dry; but the interstices of the coarse aggregates should be measured, and at least sufficient mortar used to fill the voids and give a 10 per cent. surplus.

Mixing Concrete.

Thorough mixing.

42. The ingredients for all concrete shall be carefully measured to insure correct proportions, and are to be thoroughly mixed to the desired consistency, the cement uniformly distributed, and the mass homogeneous and of a uniform colour.

Machine mixing.

43. When conditions will permit, a machine mixer is to be used. It is to be of a type approved by the engineer, and such as will ensure the perfect intermixing of the materials employed.

Fine concrete. Gravel.

44. Where gravel concrete mixed by hand is used the concrete shall be mixed on a water-tight box or platform placed close to the work, by first spreading evenly a layer of gravel, upon this shall be spread a proportionate quantity of cement, and the two thoroughly intermixed in a dry state. To this sufficient clean water shall be slowly added, and the whole again thoroughly mixed and brought to a proper consistency.

Broken stone.

45. Where broken stone concrete mixed by hand is used, the concrete shall be mixed on a water-tight box or platform placed close to the work, by first spreading evenly a layer of sand, upon this shall be evenly spread the proportionate quantity of cement, and the two thoroughly mixed in a dry state. To this water shall be added, and the whole thoroughly mixed until a good mortar is formed. The proportionate amount of stone after being dampened, shall then be spread evenly over the mortar and thoroughly intermixed therewith.

Cement mortar.

46. Cement mortar shall be a mixture of sand and cement in the required proportions; the sand and cement to be first mixed in a dry state, then sufficient water added to properly moisten, and the whole again thoroughly intermixed. Where cement mortar is applied to a concrete base it shall be put in place before the latter has set, so that a perfect bond between the two shall be secured, the surface to be floated and trowelled until smooth and even, and otherwise marked as required for the work in which it is used.

Rubble concrete.

47. Within the body of the abutments, piers and wing walls of not less than four feet span, but not nearer than six inches to the surface in any direction, stones not larger than one man can readily lift, may be placed by hand in layers. These stones shall be in "rack and pinion" order, and not less than two inches apart. In hot weather the stones shall be dampened before placing in the concrete; or, if dirty, the stones shall be well flushed to remove the earth, loam, or objectionable material. Concrete shall be carefully inserted between the stones thus placed and thoroughly packed and rammed so as to fill all voids. Concrete shall cover each layer of stones to a thickness of half the depth of the stones, when another layer of stones may be placed. A facing of fine concrete is at all times to be kept at least six inches higher than the rubble concrete, and shall be united with the rubble concrete so as to form a continuous and solid mass. This outer rim of concrete shall precede the placing of the rubble work within, and shall be placed around the interior of the casing to a thickness of six inches. It is to be thoroughly pounded so that no cavities shall remain when the outside casing is removed. In no instance is the rubble concrete to extend higher than one foot below the top of the pier, wing wall or abutment, which top of pier, wing wall or abutment shall be finished with fine concrete rich in cement. The rubble stone is not under any circumstances to extend into a coping, arch or floor.

Concrete under water.

48. Concrete shall preferably be laid under water by means of a coffer-dam, from which the water is wholly removed, and any other method adopted must be approved by the engineer. Dumping into the water from a wheel-barrow or other appliance, or shovelling in, will not

be allowed. Special care must be taken in laying the base of a pier or abutment around the head of piles, to provide that the concrete shall be of sufficient strength and durability, by increasing the proportion of cement or otherwise as directed by the engineer or inspector in charge.

Placing Concrete.

Laying the concrete.

49. While the work is in progress it shall be so arranged that a steady supply of mixed concrete shall pass from the mixing box to the point where it is to be placed, and in no case will concrete be used after it has take initial set. The re-tempering of concrete will not be allowed.

Bonding concrete.

50. At any time when the work is interrupted before its completion, or at the end of the day, a wet covering shall be placed over the last layer of concrete; before the work of depositing the concrete is resumed this surface shall be thoroughly flushed with water to remove any foreign material which may have gathered thereon, and coated with neat cement mortar. The surface is to be roughened, with steel brushes, or is to be picked, if so directed by the engineer.

Weather conditions.

51. Concrete is not to be laid in wet or freezing weather unless arrangements, approved by the engineer, are made for heating all materials, and maintaining a temperature above freezing until the concrete has set. When weather conditions are unfavorable, work is to be discontinued if so directed by the engineer.

Protecting concrete.

52. Exposed surfaces are to be kept wet for one week after the concrete is put in place, and in hot weather must be protected from the direct rays of the sun.

Ramming.

53. Wet concrete is to be used for reinforced work in order that the steel may be perfectly surrounded; but in heavy work, such as foundations and abutments, a dryer mixture is to be used, and is to be such that, after thorough ramming, moisture comes to the surface. Dry concrete is to be rammed in layers not exceeding eight inches in thickness, so as to make a perfectly compact mass, free from spaces and air bubbles.

Jarring of concrete.

54. Concrete is to be deposited in a careful manner, and in such a way as not to jar the form work or steel reinforcement, until the concrete is thoroughly hardened.

Spading.

55. Grout is to be worked to surfaces in all forms, by spading against the forms, forcing large pieces of aggregate back and permitting the finer material to come to the surface.

Surface finish.

56. The surface is to be so worked that when the forms are removed it shall be smooth and free from voids. If defective in this respect, the surface may be grouted with mortar of equal proportions to that used in the concrete, care being taken to remove all loose sand and dead material, and under such further conditions as may be considered necessary by the engineer. If a "rubbed" finish is specified, the surface, when

the forms are removed and cavities filled, is to be washed with a grouting composed of one part of Portland cement and two parts of fine sand, and the whole gone over with a piece of sandstone or corundrum, to remove all irregularities. A "washed" finish, if specified, shall require that, about ten hours after the concrete has been deposited, the forms shall be removed, the surface washed or scrubbed with clean water or a weak solution of muriatic acid, to remove the cement and expose the finer stone.

57. Concrete in arches is to be put in place continuously until the ring is completed when possible. When it is necessary to discontinue work, or when the work is laid in alternate sections, joints are to be clean cut and truly radial from the centre at that point. Work may be roughened, but is not to be left with an uneven or slanting surface, or with loose material covering it. Concrete in Arch rings.

Abutments and Wing Walls.

58. Should it be necessary to extend the piers, abutments and wing walls to a greater depth than is provided by the plans, the bottom widths unless otherwise directed by the engineer, shall be continued with a minimum batter as indicated upon the said plans. The base or footings shall extend to the required widths around the bottom of the wall. Wing walls shall be constructed at such angle with the abutments and with such dimensions as shall be given by the engineer in charge of the work. Dimensions.

59. An excavation of the depth indicated upon the plans shall be made below the present bed of the stream and to the full width of the footings, the bottom to be made perfectly level before beginning to lay the concrete. Should a greater depth be necessary to provide a firm foundation, it shall be made as directed by the engineer; all excavated earth to be disposed of as directed by the said engineer. Excavation and footings.

60. The abutments and wing walls shall be constructed of fine and rubble concrete. Large stones for rubble concrete shall be approved by the engineer, otherwise fine concrete only shall be used. Concrete.

61 The abutments, piers and wing walls herein referred to shall include those erected for steel or other superstructure, also for concrete arches and square-top structures. Abutments defined.

Concrete Floors for Steel Bridges.

62. Concrete bridge floors shall be reinforced with steel of approved quality and shapes. Wheel-guards shall be steel channels or concrete at least 6 inches by 6 inches, and such as will prevent the hubs of wheels striking any part of the bridge. Concrete floors and wheel guards.

63. The thickness of concrete shall in general be 6½ inches at the centre and 5½ inches at the sides, but shall be such as will, with the addition of steel reinforcement, fully provide for the allowed stresses and loading. The surface is to be truly and uniformly curved from Thickness of concrete.

centre to side, and to an approved template supplied by the contractor for this purpose. Upper flanges of stringers are to be stayed by concrete at least one-half inch below the top of the stringers, unless otherwise required by the engineer.

Reinforcement.

64. The metal with which the said concrete floor is to be reinforced shall be expanded metal, wire netting, steel bars or other metal approved by the engineer, and is to be completely surrounded by concrete. It shall be so placed within the concrete and shall be of such tensile strength as to fully provide for the specified loading.

Drainage.

65. Down pipes, grating and other openings or fixtures shall be placed in the walk or roadway wherever required by the engineer, and discharging clear of all steel or other part of the structure subject to injury thereby.

Framework and staging.

66. All temporary framework or staging shall be provided and erected by the contractor to support the concrete flooring while in process of construction, this framework to be firm and substantial, of suitable lumber, and in all respects approved by the engineer.

Wearing surface.

67. The sidewalk and roadway shall have a wearing surface one and one-half inches in depth of sand and cement, mixed in the proportion of one part by measure of cement to two parts of sand, the sand to be clean, sharp, of varying sized grain and free from loam, earth or other impurities. This top coating shall be applied to the concrete base before the latter has set, so that a perfect bond between the two will be secured. The surface shall be floated and trowelled until smooth and even, and shall be finished with a toothed roller, or as directed by the engineer. No inequalities from which water will not drain will be permitted.

Forms.

Forms, moulds, and centering.

68. In proportioning forms and centres, concrete is to be regarded as a liquid of its full weight for vertical loading, and half its weight for horizontal pressure. Forms, moulds, and centering are to be accurately made to the dimensions shown on the plans, and competent carpenter work must be provided. Exposed surfaces must be of dressed lumber, well-fitted, preferably tongued and grooved. All formwork must be of ample strength, well supported and braced. Arched centering must be so arranged that it may be lowered by the removal of wedges or other suitable device. All framework is to be securely bonded by approved wire, in general No. 9. The engineer shall have the right to reject any work or material in this connection which in his opinion will not give suitable results.

Removal of forms.

69 Forms are not to be removed, in general, in less than 14 days in summer and 28 days in cool weather, except in the case of vertical surfaces that do not carry load. Centres under arches are not to be removed in less than 28 days.

70. To prevent concrete from sticking, the forms for exposed surfaces shall be oiled or soaped on the side next the finished work. If soap is used, it shall be mixed with enough water to make a thin jelly. Forms are to be cleaned at each setting and re-coated with soap or oil. The lagging of arch centres, if not of tongued and grooved material, is to be rubbed with hard soap to fill the joints. Oil and soap for forms.

71. Every care must be taken to see that the inside of the form is free from shavings, sawdust, blocks of wood or other *débris* before placing the concrete. An opening should be left in the bottom of the form for the removal of such material Care must be taken to remove temporary spacing pieces when the concrete reaches them. Sawdust and debris.

Excavation and Grading.

72. Excavation is to include the removal of all material of whatsoever nature met with in order to reach the depths and dimensions required by the plans, and the piling or placing of the same where directed by the engineer. No concrete shall be put into the foundation until the excavation has been examined and approved by the engineer. Excavation.

73. Grading is to include the furnishing of all material, machinery or tools necessary, laying and spreading road material, and leaving the roadway complete and ready for use. It shall include all cuts or embankments required for the formation of the highway, filling over arches, cutting all ditches or drains, removing trees, walls, fences, and all other obstacles to the work, or to leaving the highway in a safe and passable condition in accordance with the details for grading shown on the plans or elsewhere more specifically stated. Grading.

General Conditions.

74. The general conditions attached to the specifications for steel highway bridges, sections 173 to 195 inclusive, are wherever applicable, to be included with and form a part of these specifications for concrete structures. To include from steel specifications.

FORM OF CONTRACT.

THIS AGREEMENT made the ..... day of ..... A.D. One thousand nine hundred and .....

BETWEEN:

. . ..

hereinafter called the "CONTRACTOR"
OF THE FIRST PART

AND

THE MUNICIPAL CORPORATION OF THE .....
of ..... hereinafter
called the "CORPORATION,"
OF THE SECOND PART

1. WITNESSETH that the said Contractor for himself, his heirs, executors, administrators and assigns, hereby covenants and agrees to and with the said Corporation of the Second Part that he, the said Contractor, shall and will for the consideration hereinafter mentioned, provide and supply all the materials and perform all the work and labor necessary for the construction of certain works as follows, viz.:

. . . .

. . . .

. . . .

. . . .

. . . .

. . . .

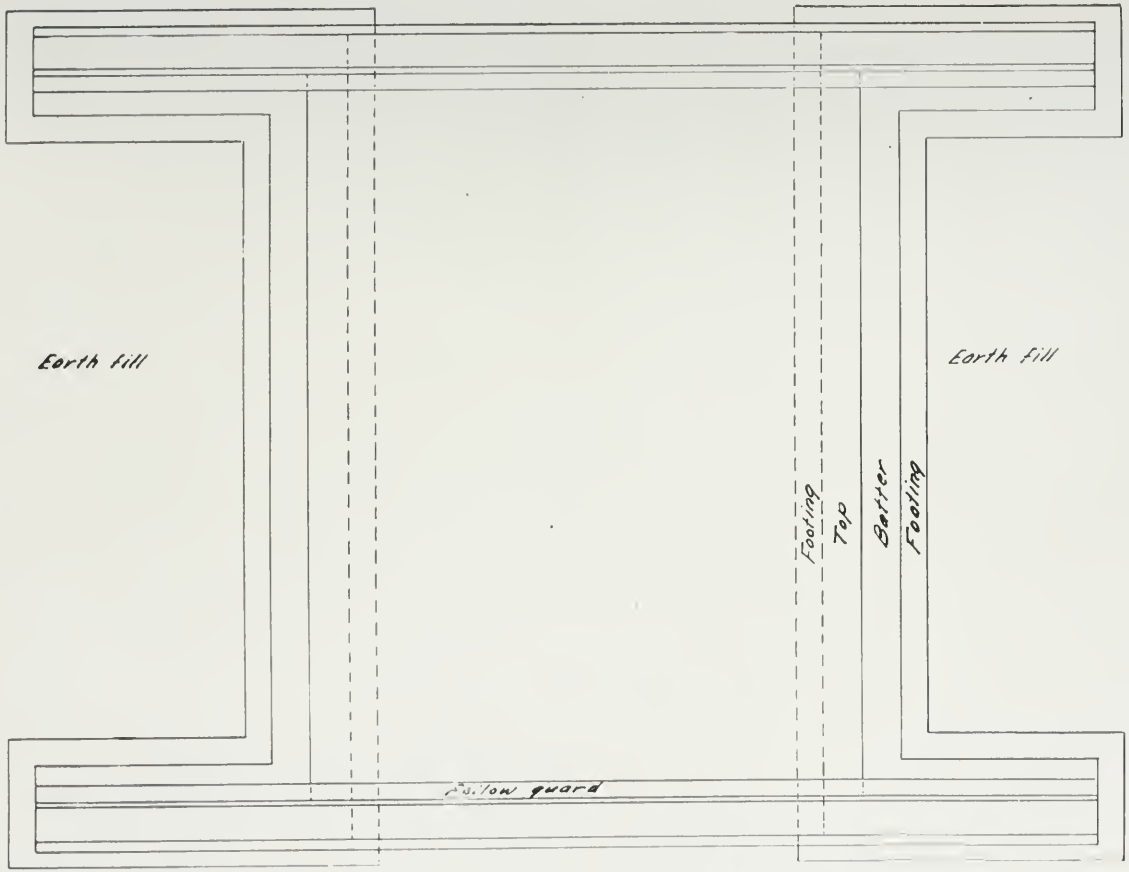
2. THE SAID CONTRACTOR of the First Part hereby agrees to execute the whole of the said work in a substantial and workmanlike manner and to the approval of the engineer acting on behalf of the said Corporation, and in accordance with the specifications hereto attached, which specifications are in agreement with the last revised specifications approved by the Provincial Engineer of Highways.

3. The said Corporation of the Second Part for themselves, their successors and assigns, hereby covenant, promise and agree to and with the said Contractor his heirs, executors, administrators and assigns, that the said Corporation of the Second Part, in consideration of the covenants and agreements contained in this agreement being strictly performed and kept by the said Contractor as aforesaid, shall and will pay or cause to be paid to the said Contractor or his heirs and assigns as aforesaid the sum of .....

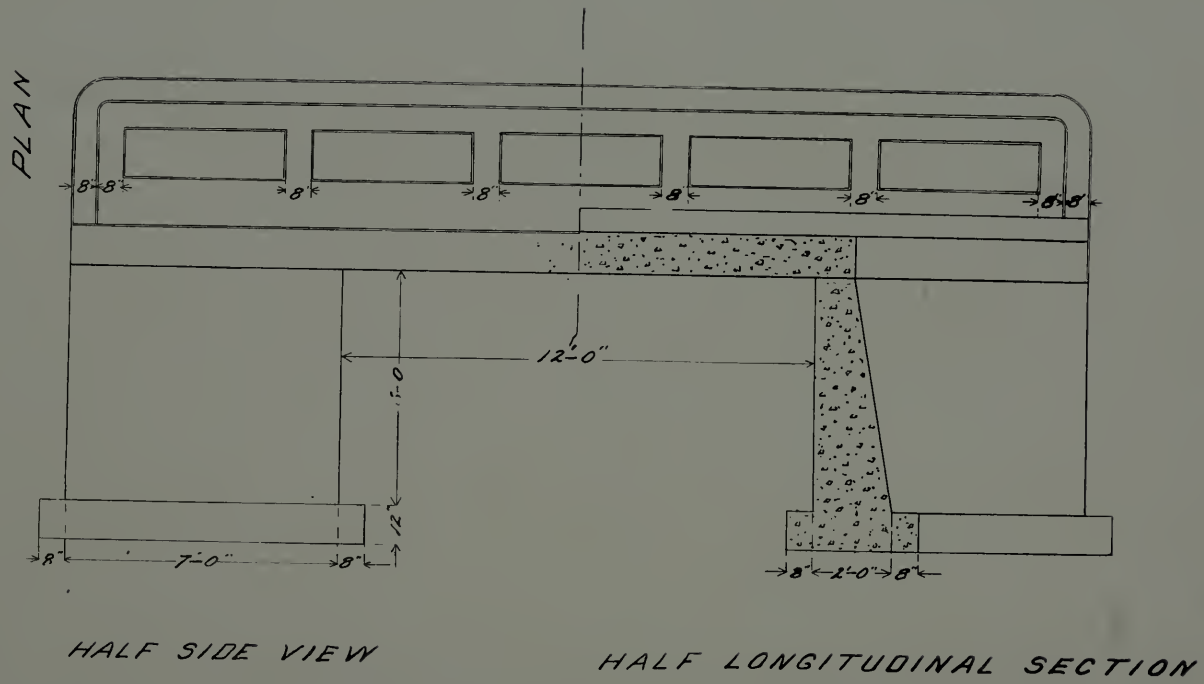
4. The parties hereto do hereby agree that time shall be of the essence of this agreement and in case the said works are delayed by the said Contractor and are not completed within the period stated in the specification hereto attached, the said party of the Second Part shall be entitled to deduct from the amount of the contract sum for liquidated and ascertained damages, the sum of five dollars per day for every day during which the said works may remain incomplete or unfinished, in addition to the amount of any expense or outlay which the said Corporation may unavoidably incur in consequence of such delay; but in case of fires, accidents or other unavoidable delay, a further extension of time may be granted by the Municipality.

5. The parties hereto further agree that the specifications aforesaid which are hereto attached together with any plans which may be found necessary or advisable, by the Corporation, shall be considered a part and parcel of this agreement.

IN WITNESS whereof the party hereto of the First Part has hereunto set his hand and seal, and the party hereto of the Second Part has hereunto attached its Corporate Seal the day and year first above written.



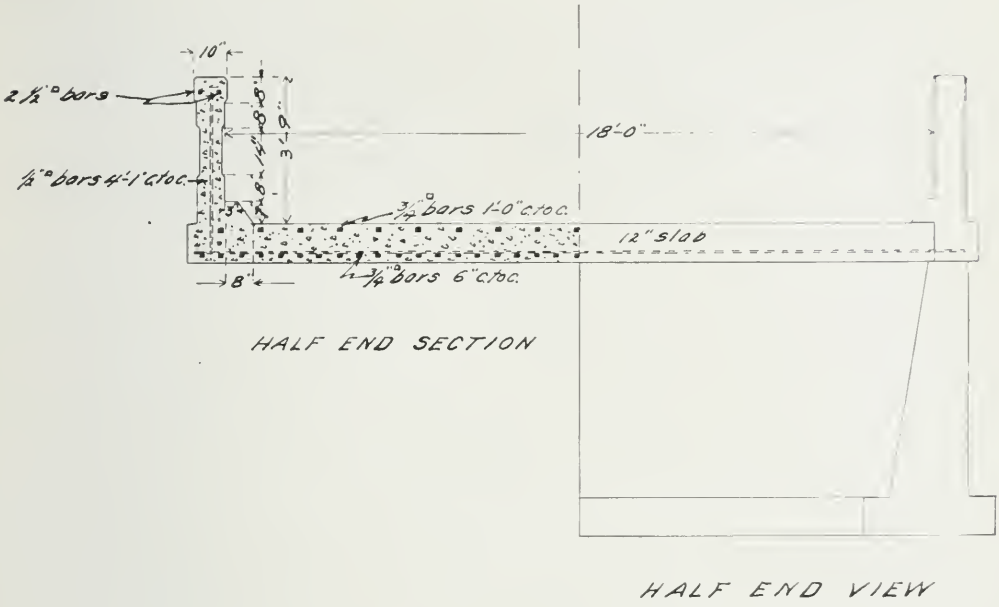
Concrete Bridge with Slab Cover—Ground Plan Scale, 1 inch = 5 feet.



HALF SIDE VIEW

HALF LONGITUDINAL SECTION

Concrete Bridge with Slab Cover. Scale, 1 inch=5 feet



Concrete Bridge with Slab Cover. Scale, 1 inch = 5 feet.

The reinforcement and slab are designed for a clear span of twelve feet, and the bridge is intended to be built under the specifications for concrete structures in this Report. The wing walls are shown at right angles to the barrel of the bridge, so as to give a greater length of guard-rail and a consequently better appearance. A somewhat cheaper bridge might be built by using a short guard-rail, with flared wing walls sloped more closely to the form of the embankment. A still better appearance may be had by slightly curving the wing walls, using thin tongued and grooved lumber, which is readily bent to the desired radius.

Depths of slab and details of reinforcement are shown in the following schedule for spans from six feet to sixteen feet:—

Clear Span in feet.	Depth of Slab.	Reinforcement.		
		Under Side.	Upper Side.	Lateral.
6	8 in.	½ in. sq. bars, 6 in. c. to c.	½ in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.
8	8 in.	⅝ in. sq. bars, 6 in. c. to c.	⅝ in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.
10	10 in.	⅝ in. sq. bars, 6 in. c. to c.	⅝ in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.
12	12 in.	¾ in. sq. bars, 6 in. c. to c.	¾ in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.
14	14 in.	⅞ in. sq. bars, 6 in. c. to c.	⅞ in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.
16	16 in.	1 in. sq. bars, 6 in. c. to c.	1 in. sq. bars, 1 ft. c. to c.	½ in. sq. bars, 1 ft. 6 in. c. to c.

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HON. J. O. REAUME

MINISTER PUBLIC WORKS, ONTARIO

THE LATE JOHN ARMSTRONG

SECRETARY LABOUR BUREAU

ELEVENTH REPORT

OF

The Bureau of Labour

OF THE

PROVINCE OF ONTARIO

For the Year Ending December 31st

1910

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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TORONTO.

To His Honour John Morison Gibson, K.C., LL.D., etc., etc., etc.,

Lieutenant-Governor of Ontario.

May it Please Your Honour:

The undersigned has the honour to present herewith for your consideration the Report of the Bureau of Labour of the Province of Ontario for the year 1910.

I have the honour to be,

Your Honour's most obedient servant,

J. O. REAUME,

Minister of Public Works.

To the Honourable J. O. Reaume,

Minister Public Works, Ontario:

Sir,—I have the honour of submitting to you herewith the Eleventh Report of the Bureau of Labour.

I have the honour to be, Sir,

Your obedient servant,

E. J. TOKER,

Acting Secretary.

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ELEVENTH REPORT

OF THE

BUREAU OF LABOUR

1910.

INTRODUCTION.

In presenting the Eleventh Report of the Bureau of Labour of the Province of Ontario, it can be stated that the work of the Bureau has still continued to grow and increase in usefulness.

The four free employment bureaus, established in Berlin, Hamilton, London and Ottawa, have continued their operations with increased success, and the fifth, which was located at Brantford in April, has done its part efficiently. The managers still suggest that they would obtain better results if they were allowed to use greater means of publicity.

The returns by the municipal clerks have continued to increase in number, there being 769, as compared with 756 for 1908, and 704, 559 and 227 for the three preceding years. Much correspondence was necessary to obtain them, and to secure more complete information. The tabulation of these statistics evidences satisfactory municipal progress. It shows 19,102 new buildings erected in 1909, costing $43,355,358; expended on permanent improvements, such as roads, sidewalks, bridges, etc., $5,495,941, and on sanitation, including sewers, $1,417,781. Of these amounts the 18 cities, their number being reduced by one through the absorption of West Toronto by the Provincial Capital, report 11,530 new buildings costing $31,654,875, expenditure on permanent improvements, $3,041,517, and on sanitation $900,563. The 120 towns reporting (three not doing so in spite of repeated applications), give 2,493 new buildings, costing $5,153,485; expenditure on permanent improvements $695,382, and on sanitation $492,435. The 135 incorporated villages, one not reporting, give 519 new buildings, costing $1,018,147; expenditure on permanent improvements, $161,110, and on sanitation, $10,297. The 496 townships or groups of townships reporting, about 40 not doing so, give 4,560 new buildings, costing $5,528,851; expenditure on permanent improve-

ments $1,597,932, and on sanitation $14,486. Though there is a considerable improvement, these returns are not, in too many cases, as complete as they should be, and from this fact and the difficulties advanced by some of the clerks, there is still evidence that the municipal accounts are not always kept in a satisfactory manner. The reports of the clerks are given in detail, showing, among other information not susceptible of tabulation, the new industrial establishments started during the previous year, and the openings for other industries.

The statistics of the public utilities owned and operated by the municipalities, as published in the last two annual reports, are again given, with the satisfactory showing that their capitalization has increased to considerably over $30,000,000 for the 160 municipalities making returns. The 18 cities report assets of this nature of $20,333,292, 92 towns $9,975,655, 42 villages $985,008, and 8 townships $73,547. A subsequent table classifies these public utilities as follows: Waterworks, $25,022,444; electric lighting, $4,211,989; gas works, $505,214; street railways, $657,978; power plants, $672,533; telephone systems, $277,344; miscellaneous, $20,000; total, $31,367,502.

The returns by the labour organizations have slightly decreased in number from last year, though still showing a marked increase over preceding years, being 335, as compared with 358 for 1908, 320 for 1907, 271 for 1906, and 156 for 1905. There is still manifest a reluctance on the part of some of the secretaries and their organizations to give the required information, a position which it is difficult to understand, in view of the willingness of the trade unions in all other countries to afford and even welcome such publicity.

The returns from the manufacturers have continued to increase in number, being 679, as compared with 652 for 1908, 592 for 1907, 427 for 1906, and 205 for 1905. Of these returns only 37 were incomplete in material points, a smaller number than previously, leaving to be tabulated 642 establishments, employing 49,090 persons, as compared with 610 establishments employing 39,156 in 1908; 536 establishments employing 42,626 in 1907; 384 establishments employing 35,316 in 1906 and 153 employing 8,505 in 1905. The aggregate number of days in operation in these 642 establishments was 183,186, as compared with 172,573 in 1908; 154,905 in 1907; 113,434 in 1906, and 43,718 in 1905. The product was $111,392,169, as against $95,479,586 in 1908; $100,097,507 in 1907; $83,198,546 in 1906, and $18,473,139 in 1905. The wages were $21,392,444, as compared with $16,681,496 in 1908; $19,123,227 in 1907; $15,869,337 in 1906, and $3,458,914 in 1905. The average wage rate per year was $452.15, and per day $1.58, as compared with $443.99 and $1.58 in 1908; $459 and $1.60 in 1907; $449.43 and $1.52 in 1906, and $406.69 and $1.48 in 1905.

In the succeeding table, giving in condensed form the increases and decreases in product and in wages, it is shown that the average increase in product in all the classes was 16.48 per cent., 39 establishments reported unspecified increases, 14

unspecified decreases, and 122 the same product as previously. The average increase in wages in all the classes was 9.12 per cent.; 54 establishments reported unspecified increases, 1 an unspecified decrease, and 254 no change from previously. None of the 30 classes showed average specified decreases in either product or wages, and very few reported unspecified decreases. The decreases in product and wages recorded in last report in some industries had ceased, and the rule of increases in previous years was resumed.

The notes of increases of wages and shortening of hours of labour, though not professing to be complete shows the continued progress and the spread of the general level.

There are the usual condensed notices of labour legislation, trade disputes, legal decisions, directories of labour organizations and similar information.

The correspondence of the Bureau has continued to increase. Of the tenth report over five thousand were sent out, including several hundreds mailed to special applicants. The usual schedules and circulars were sent to municipal clerks, secretaries of labour organizations and manufacturers. There were also sent out over a thousand letters giving information required, urging the return of schedules or fuller details and concerning other matters within the scope of the Bureau.

As usual there were many personal interviews concerning fair wages or hours in public contracts, labour legislation, legal decisions, statistics of industries, etc. Information was as customary sought by University students preparing papers on political economy, industrial questions and so forth.

The illness followed by the lamented death of the late Secretary of the Bureau, Mr. John Armstrong, has caused the presentation of this report to be somewhat deferred.

E. J. Toker,

Acting Secretary,

Bureau of Labour.

MUNICIPAL STATISTICS.

The usual schedules were sent to all the municipal clerks, asking for information as to industries started in 1909, openings for other industries, number and cost of new buildings, and amounts expended on permanent improvements and sanitation. There was also continued the enquiry, introduced two years ago, as to the public utilities owned and operated by municipalities, the result being the satisfactory showing of $31,364,502 invested in this manner. The clerks of all the cities, of all but a few of the towns and villages, and of more than nine-tenths of the townships, filled in and returned these schedules to the number of 769, an increase of 15 over the previous year, and of 65, 194 and 494 over 1907, 1906 and 1905 respectively. The information contained in these reports is given in full.

The following is the list of cities, towns, villages and townships which made returns through their clerks. There were 48 townships grouped with others, making the total number of municipalities 817.

NOTE.—C. for City; Tn. for Town; V. for Village; Tp. for Township.

Abinger, Tp.
Acton, V.
Adelaide, Tp.
Adjala Tp.
Admaston, Tp.
Adolphustown, Tp.
Ailsa Craig, V.
Albemarle, Tp.
Alberton, Tp.
Albion, Tp.
Aldborough, Tp.
Alexandria, Tn.
Alfred, Tp.
Algona, N., Tp.
Algona S., Tp.
Alice & Fraser, Tps.
Alliston, Tn.
Almonte, Tn.
Alnwick, Tp.
Alvinston, V.
Amabel, Tp.
Amaranth, Tp.
Ameliasburgh, Tp.
Amherst Island, Tp.
Ancaster, Tp.
Anderdon, Tp.
Anglesea, Tp.
Anson and Hindon, Tps.
Anstruther, Tp.
Appleby, Tp.
Arkona, V.
Armour, Tp.
Arnprior, Tn.
Arran, Tp.
Artemesia, Tp.
Arthur, Tp.
Arthur, V.
Ashby, Tp.
Ashfield, Tp.
Assiginack, Tp.
Athens, V.
Athol, Tp.
Atwood, Tp.
Augusta, Tp.
Aurora, Tn.
Aylmer, Tn.
Ayr, V.
Bagot and Blythfield, Tps.
Bancroft, V.
Bangor, Wicklow and McClure, Tps.
Barrie, Tn.
Barrie, Tp.
Barton, Tp.
Bastard and Burgess, Tps.
Bath, V.
Bathurst, Tp.
Bayfield, V.
Bayham, Tp.
Beamsville, V.
Beaverton, V.
Bedford, Tp.
Beeton, V.
Belle River, V.
Belleville, C.
Belmont & Methuen, Tps.
Berlin, Tn.
Bertie, Tp.
Beverly, Tp.
Bexley, Tp.
Biddulph, Tp.
Billings, Tp.
Binbrook, Tp.
Blandford, Tp.
Blanshard, Tp.
Blenheim, Tn.
Blenheim, Tp.
Blezard, Tp.
Blind River, Tn.
Bloomfield, V.
Blue, Tp.
Blyth, V.
Blythfield, Tp.
Bobcaygeon, V.
Bolton, V.
Bonfield, Tn.
Bosanquet, Tp.
Bothwell, Tn.
Bowmanville, Tn.
Bracebridge, Tn.
Bradford, V.
Brampton, Tn.
Brant, Tp.
Brantford, C.
Bridgeburg, V.
Bright, Tp.
Brighton, Tp.
Brighton, V.
Brock, Tp.
Brockville, Tn.
Bromley, Tp.
Brooke, Tp.
Brougham, Tp.
Bruce, Tp.
Bruce Mines, Tn.
Brudenell and Lyndoch, Tps.
Brussels, V.
Buchanan, Tp.
Bucke, Tp.
Burford, Tp.
Burgess N., Tp.
Burgess S., Tp.
Burk's Falls, V.
Burleigh and Anstruther, Tps.
Burlington, V.
Burpee, Tp.
Cache Bay, Tn.
Caistor, Tp.
Caledon, Tp.
Caledonia, Tp.
Caledonia, V.
Calvin, Tp.
Cambridge, Tp.
Camden E., Tp.
Cameron, Tp.
Carnarvon, Tp.
Canborough, Tp.
Cannington, V.
Canonto N., Tp.
Canonto S., Tp.
Carden, Tp.
Cardiff, Tp.
Cardinal, V.
Cardwell, Tp.
Carleton Place, Tn.
Carling, Tp.
Carlow, Tp.
Carrick, Tp.
Cartwright, Tp.
Casey, Tp.
Cashel, Tp.
Casimir, Jennings and Appelby Tps.
Casselman, V.
Cavan, Tp.
Cayuga, V.
Cayuga N., Tp.
Cayuga S., Tp.
Chaffey, Tp.
Chamberlain, Tp.
Chapleau, Tp.
Chapman, Tp.
Chapple, Tp.
Charlottenburg, Tp
Charlotteville, Tp.
Chatham, C.
Chatham, Tp.
Chatsworth, V.
Chesley, Tn.
Chesterville, V.
Chinguacousy, Tp.
Chippawa, V.

Christie, Tp.
Clara, Tp.
Clarence, Tp.
Clarendon and Miller, Tps.
Clarke, Tp.
Clifford, V.
Clinton, Tn.
Clyde, Tp.
Cobalt, Tn.
Cobden, V.
Cobourg, Tn.
Cockburn Island, Tp.
Colborne, Tp.
Colborne, V.
Colchester N., Tp.
Colchester S., Tp.
Coldwater, V.
Coleman, Tp.
Collingwood, Tn.
Collingwood, Tp.
Copper Cliff, Tn.
Cornwall, Tn.
Cornwall, Tp.
Courtright, V.
Cramahe, Tp.
Creemore, V.
Crosby N., Tp.
Crosby S., Tp.
Crozier, Tp.
Culross, Tp.
Cumberland, Tp.
Dalhousie and N. Sherbrooke, Tps.
Dalton, Tp.
Darling, Tp.
Dawn, Tp.
Day and Bright Additional Tps.
Delaware, Tp.
Delhi, V.
Denbigh, Abinger & Ashby, Tps.
Denison, Tp.
Derby, Tp.
Dereham, Tp.
Deseronto, Tn.
Dilke, Tp.
Dorchester N., Tp.
Dorchester S., Tp.
Douro, Tp.
Dover, Tp.
Downie, Tp.
Draper, Tp.
Drayton, V.
Dresden, Tn.
Drummond, Tp.
Drury, Denison and Graham, Tps.
Dryden, Tn.
Dudley, Tp.
Dumfries N., Tp.
Dumfries S., Tp.
Dummer, Tp.
Dundalk, V.
Dundas, Tn.
Dungannon, Tp.
Dunn, Tp.
Dunnville, Tn.
Durham, Tn.
Dutton, V.
Dymond, Tp.
Dysart, &c., Tps.
Easthope, N., Tp.
Easthope, S., Tp.
Eastnor, Tp.
Eastview, V.
Effingham, Tp.
Eganville, V.
Egremont, Tp.
Ekfrid, Tp.
Elderslie, Tp.
Eldon, Tp.
Elizabethtown, Tp.
Ellice, Tp.
Elma, Tp.
Elmira, V.
Elmsley, N., Tp.
Elora, V.
Embro, V.
Emily, Tp.
Emo, Tp.
Enniskillen, Tp.
Eramosa, Tp.
Erin, Tp.
Erin, V.
Ernestown, Tp.
Escott Front, Tp.
Escott Rear, Tp.
Esquesing, Tp.
Essa, Tp.
Essex, Tn.
Etobicoke, Tp.
Euphemia, Tp.
Euphrasia, Tp.
Evanturel, Tp.
Exeter, Tn.
Eyre, Tp.
Faraday, Tp.
Fenelon, Tp.
Fenelon Falls, V.
Fergus, V.
Ferris, Tp.
Finch, Tp.
Finch, V.
Fitzroy, Tp.
Flamborough E., Tp.
Flamborough W., Tp.
Flos, Tp.
Foley, Tp.
Forest, Tn.
Fort Erie, V.
Fort Frances, Tn.
Fort William C.
Fredericksburgh N., Tp.
Fredericksburgh S., Tp.
Fullarton, Tp.

Gainsboro, Tp.
Galt, Tn.
Gananoque, Tn.
Garafraxa E., Tp.
Garafraxa W., Tp.
Garden Island, V.
Garson, Tp.
Georgetown, V.
Georgina, Tp.
Glamorgan, Tp.
Glanford, Tp.
Glenelg, Tp.
Gloucester, Tp.
Goderich, Tn.
Goderich, Tp.
Gordon, Tp.
Gore Bay, Tn.
Gosfield N., Tp.
Gosfield S., Tp.
Goulburn, Tp.
Gower N., Tp.
Gower S., Tp.
Graham, Tp.
Grand Valley, V.
Grantham, Tp.
Grattan, Tp.
Gravenhurst, Tn.
Greenock, Tp.
Grey, Tp.
Griffith and Matawatchan, Tps.
Grimsby, V.
Grimsby S., Tp.
Guelph, C.
Guelph, Tp.
Guilford, Tp.
Gwillimsbury E., Tp.
Gwillimbury, N., Tp.
Gwillimsbury W., Tp.
Hagar, Tp.
Hagerman, Tp.
Hagersville, V.
Haileybury, Tn.
Haldimand, Tp.
Hallam, Tp.
Hallowell, Tp.
Hamilton, C.
Hamilton, Tp.
Hanmer, Tp.
Hanover, Tn.
Harburn, Tp.
Harcourt, Tp.
Harley, Tp.
Harriston, Tn.
Harvey, Tp.
Harwich, Tp.
Hastings, V.
Havelock, Tp.
Havelock, V.
Hawkesbury, Tn.
Hawkesbury E., Tp.
Hawkesbury, W., Tp.
Hay, Tp.
Head, Maria and Clara, Tps.
Hensall, V.
Hepworth, V.
Herschel, Tp.
Hespeler, Tn.
Hibbert, Tp.
Hillier, Tp.
Hilton, Tp.
Himsworth N., Tp.
Himsworth S., Tp.
Hinchinbrooke, Tp.
Hindon, Tp.
Holland Landing, V.
Hope, Tp.
Horton, Tp.
Houghton, Tp.
Howard, Tp.
Howe Island, Tp.
Howick, Tp.
Howland, Tp.
Hudson, Tp.
Hullett, Tp.
Humberstone, Tp.
Humphrey, Tp.
Hungerford, Tp.
Huntingdon, Tp.
Huntley, Tp.
Huntsville, Tp.
Huron, Tp.
Ingersoll, Tn.
Ignace, Tp.
Innisfil, Tp.
Iroquois, V.
Jaffray, Tp.
James, Tp.
Jennings, Tp.
Jocelyn, Tp.
Johnson, Tarbutt, Tarbutt Addl., Tps.
Joly, Tp.
Jones, Tp.
Kaladar, Anglesea and Effingham, Tps.
Kearney, Tn.
Keewatin, Tn.
Kemptville, Tn.
Kennebec, Tp.
Kenora, Tn.
Keppel, Tp.
Kerns, Tp.
Kincardine, Tn.
Kincardine, Tp.
King, Tp.
Kingston, C.
Kingston, Tp.
Kingsville, Tn.
Kinloss, Tp.
Kitley, Tp.
Korah, Tp.
Laird, Tp.
Lake, Tp.
Lakefield, V.
Lanark, Tp.
Lanark, V.
Lancaster, Tp.
Lancaster, V.
Lansdowne Front, Tp.
Lansdowne Rear, Tp.
Latchford, Tn.
Lavallee, Tp.
Lavant, Tp.
Leamington, Tn.
Leeds and Lansdowne Front, Tps.
Leeds and Lansdowne Rear, Tps.
Limerick, Tp.
Lindsay, Tn.
Listowel, Tn.
Little Current, Tn.
Lobo, Tp.
Lochiel, Tp.
Logan, Tp

London, C.
London, Tp.
Longueuil, Tp.
L'Orignal, V.
Lorne, Tp.
Lucan, V.
Lucknow, V.
Luther E., Tp.
Luther W., Tp.
Lutterworth, Tp.
Lynedoch, Tp.
McClure, Tp.
McDougall, Tp.
McGillivray, Tp.
McIrvine Tp.
McKellar, Tp.
McKillop, Tp.
McLean and Ridout, Tps
McMurrich, Tp.
McNab, Tp.
Macaulay, Tp.
Macdonald, Meredith, etc., Tps.
Machar, Tp.
Machin, Tp.
Madoc, Tp.
Madoc, V.
Maidstone, Tp.
Malahide, Tp.
Malden, Tp.
Manvers, Tp.
Mara, Tp.
March, Tp.
Maria, Tp.
Mariposa, Tp.
Markdale, V.
Markham, Tp.
Markham, V.
Marlborough, Tp.
Marmora, V.
Marmora and Lake, Tps.
Martland, Tp.
Maryborough, Tp.
Marysburg N., Tp.
Marysburg S., Tp.
Massey, Tn.
Matawatchan, Tp.
Matchedash, Tp.
Matilda, Tp.
Mattawa, Tn.
Mattawan, Tp.
Maxville, V.
Mayo, Tp.
Medonte, Tp.
Medora and Wood, Tps.
Melancthon, Tp.
Melick, Tp.
Meredith, Tp.
Merrickville, V.
Merritton, V.
Mersea, Tp.
Metcalfe, Tp.
Methuen, Tp.
Middleton, Tp.
Midland, Tn.
Millbrook, V.
Miller, Tp.
Milton, Tn.
Milverton, V.
Minden, Tp.
Minto, Tp.
Mitchell, Tn.
Monaghan N., Tp.
Monaghan S., Tp.
Monck, Tp.
Monmouth, Tp.
Mono, Tp.
Montague, Tp.
Morley, Tp.
Mornington, Tp.
Moore, Tp.
Morris, Tp.
Morrisburgh, V.
Mosa, Tp.
Mount Forest, Tn.
Murray, Tp.
Muskoka, Tp.
Nairn and Lorne, Tps.
Napanee, Tn.
Nassagaweya, Tp.
Neebing, Tp.
Neelon and Garson, Tps.
Nelson, Tp.
Nepean, Tp.
Nepigon, Tp.
Neustadt, V.
New Hamburg, V.
New Liskeard, Tn.
Newboro, V.
Newburgh, V.
Newbury, V.
Newcastle, V.
Newmarket, Tn.
Niagara, Tn.
Niagara, Tp.
Niagara Falls, C.
Nichol, Tp.
Nipissing, Tp.
Nissouri E., Tp.
Nissouri W., Tp.
Normanby, Tp.
North Bay, Tn.
Norwich, V.
Norwich N., Tp.
Norwich S., Tp.
Norwood, V.
Nottawasaga, Tp.
Oakland, Tp.
Oakley, Tp.
Oakville, Tn.
O'Connor, Tp.
Oil Springs, V.
Olden, Tp.
Oliver, Tp.
Omemee, V.
Oneida, Tp.
Onondaga, Tp.
Ops, Tp.
Orangeville, Tn.
Orford, Tp.
Orillia, Tn.
Orillia, Tp.
Oro, Tp.
Osgoode, Tp.
Oshawa, Tn.
Osnabruck, Tp.
Oso, Tp.
Osprey, Tp.
Otonabee, Tp.
Ottawa, C.
Owen Sound Tn.
Oxford, Tp.
Oxford E., Tp.
Oxford N., Tp.
Oxford W., Tp.
Paipoonge, Tp.
Paisley, V.
Pakenham, Tp.
Palmerston, Tn.
Palmerston and Canonto N. and S., Tps.
Papineau, Tp.
Paris, Tn.
Parke, Tp.
Parkhill, Tn.
Parry Sound, Tn.
Peel, Tp.
Pelee, Tp.
Pelham, Tp.
Pembroke, Tn.
Pembroke, Tp.
Penetanguishene, Tn.
Percy, Tp.
Perry, Tp.
Perth, Tn.
Peterborough, C.
Petewawa, Tp.
Petrolea, Tn.
Pickering, Tp.
Picton, Tn.
Pilkington, Tp.
Pittsburg, Tp.
Plantagenet N., Tp.
Plummer, Addl., Tp.
Plympton, Tp.
Point Edward, V.
Port Arthur, C.
Port Carling, V.
Port Colborne, V.
Port Dalhousie, V.
Port Dover, V.
Port Elgin, V.
Port Hope, Tn.
Port Perry, V.
Port Rowan, V.
Port Stanley, V.
Portland, Tp.
Portsmouth, V.
Powassan, Tn.
Prescott, Tn.
Preston, Tn.
Prince, Tp.
Puslinch, Tp.
Radcliffe, Tp.
Raglan, Tp.
Rainham, Tp.
Rainy River, Tn.
Raleigh, Tp.
Rama, Tp.
Ramsay, Tp.
Ratter and Dunnet, Tps.
Rawdon, Tp.
Rayside, Tp.
Reach, Tp.
Renfrew, Tn.
Richmond, Tp.
Richmond West, V.
Richmond Hill, V.
Ridgetown, Tn.
Ridout, Tp.
Rochester, Tp.
Rockland, Tn.
Roddick, Tp.
Rodney, V.
Rolph, Buchanan and Wylie, Tps.
Romney, Tp.
Ross, Tp.
Roxborough, Tp.
Russell, Tp.
Ryde, Tp.
Ryerson, Tp.
St. Catharines, C.
St. Joseph, Tp.
St. Mary's, Tn.
St. Thomas, C.
Salter, May and Harrow, Tps.
Saltfleet, Tp.
Sandfield, Tp.
Sandwich, Tn.
Sandwich E., Tp.
Sandwich, S., Tp.
Sandwich W., Tp.
Sarawak, Tp.
Sarnia, Tn.
Sarnia, Tp.
Saugeen, Tp.
Sault Ste. Marie, Tn.
Schreiber, Tp.
Scott, Tp.
Scugog, Tp.
Seaforth, Tn.
Sebastopol, Tp.
Seneca, Tp.
Seymour, Tp.
Sheffield, Tp.
Shelburne, V.
Sherborne, etc., Tps.
Sherbrooke, Tp.
Sherbrooke N., Tp.
Sherbrooke S., Tp.
Shuniah, Tp.
Sidney, Tp.
Simcoe, Tn.
Smith, Tp.
Smith's Falls, Tn.
Snowdon, Tp.
Somerville, Tp.
Sophiasburg, Tp.
South River, V.
Southampton, Tn.
Southwold, Tp.
Springer, Tp.
Springfield, V.
Stafford, Tp.
Stanhope, Tp.
Stanley, Tp.
Stayner, Tn.
Steelton, Tn.

Stephen, Tp.
Stephenson, Tp.
Stirling, V.
Stisted, Tp.
Storrington, Tp.
Stouffville, V.
Stratford, C.
Strathroy, Tn.
Streetsville, V.
Strong, Tp.
Sturgeon Falls, Tn.
Sturgeon Point, V.
Sudbury, Tn.
Sullivan, Tp.
Sundridge, V.
Sunnidale, Tp.
Sutton, V.
Sydenham, Tp.
Tara, V.
Tarentorus, Tp.
Tavistock, V.
Tay, Tp.
Tecumseth, Tp.
Teeswater, V.
Tehkummah, Tp.
Thamesville, V.
Thedford, V.
Thessalon, Tn.
Thessalon, Tp.
Thompson, Tp.
Thorah, Tp.
Thornbury, Tn.
Thorold, Tn.
Thorold, Tp.
Thurlow, Tp.
Tilbury, Tn.
Tilbury E., Tp.
Tilbury N., Tp.
Tilbury W., Tp.
Tillsonburg, Tn.
Tiny, Tp.
Tiverton, V.
Torbolton, Tp.
Toronto, C.
Toronto, Tp.
Toronto Gore, Tp.
Toronto, North, Tn.
Tossorontio, Tp.
Tottenham, V.
Townsend, Tp.
Trafalgar, Tp.
Trenton, Tn.
Tudor and Cashel, Tps.
Turnberry, Tp.
Tweed, V.
Usborne, Tp.
Uxbridge, Tn.
Uxbridge, Tp.
Van Horne, Tp.
Vankleek Hill, Tn.
Vaughan, Tp.
Verulam, Tp.
Vespra, Tp.
Vienna, V.
Wainfleet, Tp.
Walkerton, Tn.
Walkerville, Tn.
Wallace, Tp.
Wallaceburg, Tn.
Walpole, Tp.
Walsingham N., Tp.
Wardsville, V.
Warwick, Tp.
Waterdown, V.
Waterford, V.
Waterloo, Tn.
Waterloo, Tp.
Waters, Tp.
Watford, V.
Watt, Tp.
Wawanosh E., Tp.
Wawanosh W., Tp.
Webbwood, Tn.
Welland, Tn.
Wellesley, Tp.
Wellington, V.
West Lorne, V.
Westmeath, Tp.
Westminster, Tp.
Weston, V.
Westport, V.
Whitby, Tn.
Whitby, Tp.
Whitby E., Tp.
Whitchurch, Tp.
Wiarton, Tn.
Wicklow, Tp.
Widdifield, Tp.
Wilberforce and N. Algona, Tps.
Williams E., Tp.
Williams, W., Tp.
Williamsburg, Tp.
Willoughby, Tp.
Wilmot, Tp.
Winchester, Tp.
Winchester, V.
Windham, Tp.
Windsor, C.
Wingham, Tn.
Wolfe Island, Tp
Wolford, Tp.
Wollaston, Tp.
Wood, Tp.
Woodbridge, V.
Woodhouse, Tp.
Woodstock, C.
Woodville, V.
Woolwich, Tp.
Worthington & Blue, Tps.
Wroxeter, V.
Wylie, Tp.
Wyoming, V.
Yarmouth, Tp.
Yonge Front, Tp.
Yonge and Escott Rear, Tps.
York, Tp.
Zone, Tp.
Zorra E., Tp.
Zorra W., Tp.

REPORTS FROM MUNICIPAL CLERKS.

ABINGER, Tp.—See Denbigh, Abinger and Ashby Tps.

ACTON, V.—Owns and operates electric light plant; cost $8,200. Openings for creamery, shoe factory, harness factory, grist mill; good openings for almost any industries. Number of buildings erected 6; cost $7,000. Amount expended on permanent improvements $1,338. A. J. McKinnon, Village Clerk, Acton.

ADELAIDE, Tp.—Number of buildings erected 3; cost $5,000. Amount expended on permanent improvements $3,000. H. J. Miller, Township Clerk, Adelaide P.O.

ADMASTON, Tp.—Number of buildings erected 3; cost $2,500. Amount spent on permanent improvements by Ontario Government . R. W. Brown, Township Clerk, Admaston Station.

ADOLPHUSTOWN, Tp.—Good opening for canning factory. No new buildings erected. Amount expended on permanent improvements $300. D. W. Roblin, Township Clerk, Parma.

AILSA CRAIG, V.—Good opening for brick and tile yard. No new buildings erected. Amount expended on permanent improvements $269. Amount expended on sanitation $1,444. E. B. Smith, Village Clerk, Ailsa Craig.

ALBEMARLE, Tp.—New sawmill started. Owns and operates waterworks, value $200. Good openings for lime kiln and woodworking industries. Number of buildings erected 5; cost $3,400. Amount expended on permanent improvements $1,000. Amount expended on sanitation $26. Percy Trount, Township Clerk, Purple Valley.

ALBERTON, Tp.—Large general store opened. Good opening for pulp or paper mill. A number of barns erected. Amount expended on permanent improvements $3,615. Hector Elliott, Township Clerk, Fort Frances.

ALBION, Tp.—Number of buildings erected 12; cost $18,000. Amount expended on permanent improvements $3,000. Robert Matson, Township Clerk, Palgrave.

ALDBOROUGH, Tp.—Good openings for cheese factories. Number of buildings erected 20; cost $30,000. Amount expended on permanent improvements $3,000. E. A. Hugill, Township Clerk, Rodney.

ALEXANDRIA, Tn.—Owns and operates waterworks and electric light plant; cost 47,500. Good openings for grist mill, carriage factory, sash and door factory, and foundry. Amount expended on permanent improvement $2,500. E. H. Tiffany, Town Clerk, Alexandria.

ALFRED, Tp.—Number of buildings erected about 40; cost about $20,000. Amount expended on permanent improvements about $1,000. B. G. Parisien, Township Clerk, Alfred.

ALGONA N., Tp.—See Wilberforce and N. Algona Tps.

ALGONA N., Tp.—Number of buildings erected 3; cost $1,450. Amount expended on permanent improvements $300 by Government. John P. Nelan, Township Clerk, Castile.

ALICE AND FRASER, Tps.—Openings for creameries. Few buildings erected owing to short crops. Statute labour; no cash expenditure on permanent improvements; Government grant $400. J. M. Kennedy, Township Clerk, Pembroke.

ALLISTON, Tn.—Owns and operates waterworks for fire protection; cost $19,000. Openings for almost any industry; good railway facilities and municipality would make concessions. Number of buildings erected 4; cost about $5,800. Amount expended on permanent improvements $500. Amount expended on sanitation $900. W. M. Lockhart, Town Clerk, Alliston.

ALMONTE, Tn.—Owns and operates electric light plant; cost $38,000. Good opening for any industry requiring power. Number of buildings erected 50; cost $50,000. Amount expended on permanent improvements $15,000. J. T. Kirkland, Town Clerk, Almonte.

ALNWICK, Tp.—Number of buildings erected 2; cost $1,000. Amount expended on permanent improvements $2,000. Amount expended on sanitation $40. Jas. Roberts, Township Clerk, Roseneath.

ALVINSTON, V.—Good openings for almost any industry, with two railways and plenty of water. Number of buildings erected 4; cost $3,500. Amount expended on permanent improvements $2,200. Amount expended on sanitation $800. John Irving, Village Clerk, Alvinston.

AMABEL, Tp.—Amount expended on permanent improvements $1,742. R. H. Murray, Township Clerk, Allenford.

AMARANTH, Tp.—Number of buildings erected 3; cost about $5,000. Amount expended on permanent improvements $9,000. E. Hamilton, Township Clerk, Laurel.

AMELIASBURG, Tp.—Good opening for canning factory. Number of buildings erected 12; cost $8,000. Amount expended on permanent improvements $1,200, besides statute labour. Amount expended on sanitation $43. F. C. File, Township Clerk, Ameliasburg.

AMHERST ISLAND, Tp.—Whey butter-making started. No new buildings erected. Amount expended on permanent improvements about $700. Wm. H. Moutray, Township Clerk, Stella.

ANCASTER, Tp.—Good opening for evaporator. Number of buildings erected 2; cost $2,500. Amount expended on permanent improvements $1,000. Henry Pim, Township Clerk, Ancaster.

ANDERDON, Tp.—Openings for various industries with good shipping facilities by rail and water. Amount expended on permanent improvements $925. A. C. Mailloux, Township Clerk, Gordon.

ANGLESEA, Tp.—See Kaladar, Anglesea and Effingham Tps.

ANSON AND HINDON, Tps.—Good openings for butter factory and for telephone line. Number of buildings erected 5; cost about $1,000. Amount expended on permanent improvements $50. T. H. Rogers, Township Clerk, Carnarvon.

ANSTRUTHER, Tp.—See Burleigh and Anstruther Tps.

ARKONA, V.—Good opening for canning factory, saw mill, waggon and sleigh factory and other industries requiring hardwood. Amount expended on permanent improvements $300. Amount expended on sanitation about $50. G. N. Brown, Village Creek, Arkona.

ARMOUR, Tp.—Good opening for grist mill. Number of buildings erected 20; cost about $4,000. Amount expended on permanent improvements $1,092. Amount expended on sanitation $20. J. N. Dodds, Township Clerk, Burk's Falls.

ARNPRIOR, Tn.—Electric power and milling plant started. Owns and operates waterworks; cost about $115,000. Good openings for machine foundry, woodworking industries, furniture factory and knitting factory. Number of buildings erected about 15; cost about $10,000. Amount expended on permanent improvements $3,100. Amount expended on sanitation $460 for sewers. Trevor H. Grout, Town Clerk, Arnprior.

ARRAN, Tp.—One new building erected; cost about $1,500. Amount expended on permanent improvements $5,941 including statute labour. Amount expended on sanitation $52. H. T. Potts, Township Clerk, Dunblane.

ARTEMESIA, Tp.—Saw mill started. Good openings for foundry, flour mill and machine shop. Number of buildings erected 5; cost $8,000. Amount expended on permanent improvements $2,798. Amount expended on sanitation $108. W. J. Bellamy, Township Clerk, Flesherton.

ARTHUR, Tp.—Number of buildings erected about 6; cost about $2,000. Amount expended on permanent improvements about $2,000. Albert Kelly, Township Clerk, Kenilworth.

ARTHUR, V.—Good openings for felt factory, button factory or boot and shoe factory. Number of buildings erected 3; cost $3,000. Amount expended on permanent improvements $800. Amount expended on sanitation $50. D. T. Small, Village Clerk, Arthur.

ASHBY, Tp.—See Denbigh, Abinger and Ashby Tps.

ASHFIELD, Tp.—Good opening for brick and tile yard. Number of buildings erected about 15; cost about $12,000. Amount expended on permanent improvements $2,910. Amount expended on sanitation $18. Thos. G. Allen, Township Clerk, Dungannon.

ASSIGINACK, Tp.—New saw mill started. Good openings for cheese factory or creamery, and sash and door factory. Number of builings erected 2; cost about

$10,000. Amount expended on permanent improvements $1,914. Amount expended on sanitation $9. A. J. McLean, Township Clerk, Manitowaning.

ATHENS, V.—Undeveloped openings for medical baths. Number of buildings erected 2; cost about $15,000. Amount expended on permanent improvements $938. G. F. Donnelley, Village Clerk, Athens.

ATHOL, Tp.—Fruit evaporating works and combined blacksmith's and woodware shop started. Good opening for factory for apple barrels and cheese boxes. Number of buildings erected 5; cost $5,150. Amount expended on permanent improvements $2,500. W. Moore, Township Clerk, Cherry Valley.

ATWOOD, Tp.—Good opening for pulp mill and stave factory, also for flour mill. Number of buildings erected 4; cost $2,800. Amount expended on permanent improvements $700. Hugh Carson, Township Clerk, Rainy River.

AUGUSTA, Tp.—Number of buildings erected 6; cost $1,700. Amount expended on permanent improvements about $5,000. John Mellafont, Township Clerk, Algonquin.

AURORA, Tn.—Owns and operates waterworks; value $30,000. Openings for industries of almost any character. Number of buildings erected 6; cost about $12,000. Amount expended on permanent improvements about $4,000. Amount expended on sanitation $500. S. H. Lundy, Town Clerk, Aurora.

AYLMER, Tn.—Shoe factory started. Owns and operates waterworks, cost $100,000; electric light plant, cost $60,000. Good opening for brick and tile yard. Number of houses erected about 35; cost about $75,000. Amount expended on permanent improvements $10,000. Amount expended on sanitation $600. Junius Bradley, Town Clerk, Aylmer.

AYR, V.—Good openings for woodenware industries. Number of buildings erected 2; cost $2,000. Amount expended on permanent improvements $746. A. J. Reid, Village Clerk, Ayr.

BAGOT AND BLYTHFIELD, Tps.—Good openings for grist and saw mills and for mineral development; immense water power for development. Number of buildings erected 5; cost $7,000. Amount expended on permanent improvements $2,000. Amount expended on sanitation $50. J. J. Dillon, Township Clerk, Calabogie.

BANCROFT, V.—Good opening for manufactures of wood goods, with plenty of raw material and good water power. Number of buildings erected 3; cost about $2,500. Amount expended on permanent improvements $500. Geo. L. Jarman, Village Clerk, Bancroft.

BANGOR, WICKLOW AND MCCLURE, Tps.—Openings for electric light plant, woollen mill, flour mill and wood work factory, with good water power and C. O. R. convenient. No new buildings erected. Amount expended on permanent improvements $353. Amount expended on sanitation $108. Wm. J. Bennett, Township Clerk, Maynooth.

BARRIE, Tn.—Gas and gasoline engine factory started. Owns and operates waterworks, value $122,485; electric light and power plants, value $82,990. Good openings for factories for furniture, boots and shoes, white wear, ready-made clothing, knitted goods, hosiery and underwear, buttons, paper and wooden boxes, woodenwares and candies. Number of houses erected about 45; cost about $75,000. Amount expended on permanent improvements $14,259. Amount expended on sanitation $21,465. E. Donnell, Town Clerk, Barrie.

BARRIE, Tp.—No new buildings erected. Amount expended on permanent improvements $50. W. P. Maynard, Township Clerk, Cloyne.

BARTON, Tp.—Number of buildings erected about 50; cost about $13,525. Amount expended on permanent improvements $42,261. Amount expended on sanitation $506. A. G. E. Bryant, Township Clerk, Mount Hamilton.

BASTARD AND BURGESS, Tps.—Number of buildings erected 2; cost $4,500. Amount expended on permanent improvements $3,000. W. J. Birch, Township Clerk, Delta.

BATH, V.—New grist mill started. One building erected; cost $400. Good opening for canning factory. Owns and operates street lights; value $120. Amount expended on permanent improvements $128. E. P. Shephard, Village Clerk, Bath.

BATHURST, Tp.—Number of buildings erected about 11; cost about $8,000. Amount expended on permanent improvements $610. Amount expended on sanitation $20. R. M. Anderson, Township Clerk, Manion.

BAYFIELD, V.—Good openings for flax mill, tile yard, and flour mill. Number of buildings erected 6; cost about $10,000. Amount expended on permanent improvements $612. H. W. Erwin, Village Clerk, Bayfield.

BAYHAM, Tp.—Good openings for canning factory, brick and tile yard, or steel works; good transportation facilities by lake and C. P. R. Number of buildings erected 3; cost $1,700. Amount expended on permanent improvements $4,000 for cement bridges. Benj. Brian, Township Clerk, Straffordville.

BEAMSVILLE, V.—Basket factory started. Owns and operates water works; cost $20,000. Good openings for pickle factory or jam factory. Number of buildings erected 10; cost about $8,000. Amount expended on permanent improvements about $100. Amount expended on sanitation about $25. H. V. Robins, Village Clerk, Beamsville.

BEAVERTON, V.—Openings for almost any kind of industry. Number of buildings erected 3; cost $9,500. Amount expended on permanent improvements $547. C. A. Paterson, Village Clerk, Beaverton.

BEDFORD, Tp.—Stone quarry and feldspar mine started. Good opening for blacksmith's shop. Number of buildings erected 6; cost about $5,000. Amount expended on permanent improvements about $1,200. Jas. McNeil, Township Clerk, Burridge.

BEETON, V.—Owns and operates waterworks, cost $14,500; electric light plant, cost $5,000. Number of buildings erected 3; cost $2,500. Amount expended on permanent improvements $1,500. Joseph Wright, Village Clerk, Beeton.

BELLE RIVER, V.—Good opening for sugar beet factory. No new buildings erected. Amount expended on permanent improvements $800. Amount expended on sanitation $100. S. Ducharm, Village Clerk, Belle River.

BELLEVILLE, C.—Owns and operates waterworks, cost about $193,000; gas works, cost about $90,000. Good openings for almost any kind of industry. Number of buildings erected 40; cost $125,000. Amount expended on permanent improvements $21,000. W. C. Mikel, City Clerk, Belleville.

BELMONT AND METHUEN, Tps..—No new buildings erected. Amount expended on permanent improvements $730. W. H. Johnston, Township Clerk, Havelock.

BERLIN, Tn.—Table factory, fuel-saver factory and rubber factory started. Owns and operates waterworks, cost $206,579; gas and electric light works, cost $340,141; street railway, cost $109,828. Good opening for any iron industry.

Number of buildings erected 121; cost about $189,000. Amount expended on permanent improvements $31,446, not including sewers. Amount expended on sanitation $8,013, including $4,912 for sewers. A. H. Millar, Town Clerk, Berlin.

Bertie, Tp.—Number of buildings erected 20; cost $13,260. Amount expended on permanent improvements $7,465, including statute labour. M. S. Pound, Township Clerk, Ridgeway.

Beverly, Tp.—Number of buildings erected 20; cost $30,000. Amount expended on permanent improvements $2,971. Wm. Wood, Jr., Township Clerk, Rockton.

Bexley, Tp.—Tannery started and cement factory resumed operations after closed. One new building erected; cost $400. Amount expended on permanent improvements $1,100, including $400 Government grant. Alfred Taylor, Township Clerk, Victoria Road.

Biddulph, Tp.—Good opening for land tile works. Number of buildings erected 19; cost $8,475. Amount expended on permanent improvements nearly $4,000. Amount expended on sanitation $36. W. D. Stanley, Township Clerk, Granton.

Billings, Tp.—Good opening for woollen mill and for cement works. Number of buildings erected 2; cost about $2,000. Amount expended on permanent improvements $1,622. W. J. McKenzie, Township Clerk, Kagawong.

Binbrook, Tp.—Number of buildings erected about 15; cost about $10,000. Amount expended on permanent improvements $2,798. W. B. Switzer, Township Clerk, Binbrook.

Blandford, Tp.—Number of buildings erected 18; cost $7,400. Amount expended on permanent improvements $3,321. Amount expended on sanitation $383. W. G. Henderson, Township Clerk, Bright.

Blanshard, Tp.—Number of buildings erected 7; cost $4,500. Amount expended on permanent improvements about $3,000. J. H. Jameson, Township Clerk, Rannock.

Blenheim, Tn.—Owns and operates electric light plant, value $12,000. Openings for almost every kind of industry. Number of buildings erected 5; cost $12,500. Amount expended on permanent improvements $1,593. Percy S. Shillington, Town Clerk, Blenheim.

Blenheim, Tp.—Number of buildings erected about 12; cost about $15,000. Amount expended on permanent improvements $5,323. Hugh Allan, Township Clerk, Richwood.

Blezard, Tp.—Good opening for cheese or butter factory. Number of buildings erected 6; cost about $3,500. Amount expended on permanent improvements $2,100. J. A. Lemieux, Township Clerk, Blezard Valley.

Blind River, Tn.—Good openings for tannery, sash and door factory, box factory, etc. Number of buildings erected 8 or 10; cost about $20,000. Amount expended on permanent improvements $4,000. John Muncaster, Town Clerk, Blind River.

Bloomfield, V.—Good opening for broom factory or barrel factory, with large sale for apple barrels. Number of buildings erected 2; cost about $2,000. Amount expended on permanent improvements about $7,000. Chas. H. Saylor, Village Clerk, Bloomfield.

Blue, Tp.—See Worthington and Blue Tps.

Blyth, V.—Tannery and glove factory started. Good openings for salt works, foundry, flax mill, knitting factory, and sawmill with machinery for mak-

ing maple rollers. Number of buildings erected 6; cost about $13,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation $50. A. Elder, Village Clerk, Blyth.

Blythfield, Tp.—See Bagot and Blythfield Tps.

Bobcaygeon, V.—Owns and operates electric light and power plant; cost $25,000; its present 200 h.p. could be doubled. Openings for various industries; wood and limestone abundant. Number of buildings erected 8; cost $9,500. Amount expended on permanent improvements $867. Chas. E. Stewart, Village Clerk, Bobcaygeon.

Bolton, V.—Good opening for the manufacture of soft drinks. Number of buildings erected 4; cost about $6,000. John MacDonald, Village Clerk, Bolton.

Bonfield, Tn.—Good opening for hardwood manufactures. Number of buildings erected 3; cost $2,250. Amount expended on permanent improvements $625. J. Moran, Town Clerk, Bonfield.

Bosanquet, Tp.—Number of buildings erected 16; cost about $13,300. Amount expended on permanent improvements $5,247. Geo. Sutherland, Township Clerk, Thedford.

Bothwell, Tn.—Owns and operates electric light plant, cost $6,000; waterworks for fire protection, cost $4,500. Good opening for canning factory or grist mill. Number of buildings erected 5; cost $5,000. Amount expended on permanent improvements $971. Amount expended on sanitation about $100. W. H. Bradley, Town Clerk, Bothwell.

Bowmanville, Tn.—Addition to foundry opened. Good openings for machine shop and brass works, or any kind of manufacturing. Number of buildings erected 7; cost $30,000. Amount expended on permanent improvements $2,700. John Lyle, Town Clerk, Bowmanville.

Bracebridge, Tn.—Bleach works started. Owns and operates electric light and power plant and waterworks; cost $110,000. Good opening for stave or barrel factory. Number of buildings erected 6; cost $17,000. Amount expended on permanent improvements $3,500. Alex. C. Salmon, Town Clerk, Bracebridge.

Bradford, V.—Opening for almost any kind of industry. Number of buildings erected 2; cost $8,000. Amount expended on permanent improvements $2,127. Robt. Stewart, Village Clerk, Bradford.

Brampton, Tn.—Owns and operates waterworks; cost about $100,000. Openings for industries generally. Number of buildings erected about 20; cost about $40,000. Amount expended on permanent improvements $8,000. Amount expended on sanitation $52,000, for sewers. T. J. Blain, Town Clerk, Brampton.

Brant, Tp.—Opeings for various industries. Amount expended on permanent improvements $4,666. Amount expended on sanitation $332. F. W. Michelhauser, Township Clerk, Elmwood.

Brantford, C.—Boot and shoe factory started. Owns and operates waterworks; cost $474,817. Good openings for almost any industry. Number of buildings erected 308; cost $439,335. Amount expended on permanent improvements $146,061. Amount expended on sanitation $75,765. H. F. Leonard, City Clerk, Brantford.

Bridgeburg, V.—Factories for varnishes and for ferro steel registers started. Owns and operates waterworks; cost $49,787. Openings for anything in manufacturing line. Number of buildings erected 25; cost $58,000. Amount expended on permanent improvements $5,340. Nothing spent on sanitation, but by-law passed to expend $30,000 on septic tank and trunk sewer. R. A. Land, Village Clerk, Bridgeburg.

Bright, Tp.—See Day and Bright Tps.

Brighton, Tp.—Good openings for any mills needing water power. Number of buildings erected about 5; cost about $4,000. Amount expended on permanent improvements $2,395. Amount expended on sanitation $75. Fred O. Wade, Township Clerk, Brighton.

Brighton, V.—Openings for various industries. Number of buildings erected 3; cost $5,000. Amount expended on permanent improvements about $3,000. Amount expended on sanitation $200. J. C. Lockwood, Village Clerk, Brighton.

Brock, Tp.—Openings for almost any kind of industry. Number of buildings erected 18; cost about $25,000. Amount expended on permanent improvements $9,050, including $3,700 statute labour. Amount expended on sanitation $258. Frank Doble, Township Clerk, Sunderland.

Brockville, Tn.—Owns and operates waterworks, cost $266,000; lighting plant, cost $175,000. Good openings for any kind of industry. Number of buildings erected 13; cost $16,000. Amount expended on permanent improvements $9,500. Amount expended on sanitation $275. Geo. K. Dewey, Town Clerk, Brockville.

Bromley, Tp.—Good openings for almost any kind of industry. No new buildings erected. Amount expended on permanent improvements $990. Jas. D. Walsh, Township Clerk, Osceola.

Brooke, Tp.—Good opening for cheese or butter factory. Number of buildings erected 5; cost about $5,000. Amount expended on permanent improvements over $5,000. Amount expended on sanitation $28. W. G. Willoughby, Township Clerk, Watford.

Brougham, Tp.—Good openings for mining. One building erected; cost about $2,500. Amount expended on permanent improvements $300, Government grant. Michael Sheedy, Township Clerk, Mount St. Patrick.

Bruce, Tp.—Good openings for summer resorts at several points on lake. Number of buildings erected about 16; cost about $8,500. Amount expended on permanent improvements $2,739. Amount expended on sanitation $106. J. G. MacKay, Township Clerk, Underwood.

Bruce Mines, Tn.—New sawmill started. Good opening for hardwood flooring mill. Number of buildings erected 2; cost $3,500. Amount expended on permanent improvements $430. Thos. Sullivan, Town Clerk, Bruce Mines.

Brudenell and Lynedoch, Tps.—Good opening for sawmill. No new buildings erected. Amount expended on permanent improvements $145. W. J. Whelan, Township Clerk, Brudenell.

Brussels, V.—Fire appliance factory and machine shop started. Number of buildings erected 2; cost $9,500 including Carnegie Library. F. S. Scott, Village Clerk, Brussels.

Burton, Tp.—See Dysart, etc., Tps.

Buchanon, Tp.—See Rolph, Buchanon and Wylie Tps.

Bucke, Tp.—Manufactory for explosives and electric railroad started. Good opening for woollen factory. Number of buildings erected about 40; cost about $20,000. Amount expended on permanent improvements about $1,000. H. McQuarrie, Township Clerk, Haileybury.

Burford, Tp.—Good openings for planing mill, sash and door factory, box factory, furniture factory, and small wooden ware factory. Number of buildings erected about 75; cost about $50,000. Amount expended on permanent improvements about $6,000. Philip Kelly, Township Clerk, New Durham.

Burgess, N. Tp.—Openings for mining. No new buildings erected. Amount expended on permanent improvements $1,200 by County; good roads system. R. T. Noonan, Township Clerk, Micaville.

Burgess, S. Tp.—See Bastard and Burgess S. Tps.

Burleigh and Anstruther Tps.—Number of buildings erected about 10; cost about $4,000. Amount expended on permanent improvements $324. Alex. Bell, M.D., Township Clerk, Apsley.

Burk's Falls, V.—Owns and operates waterworks; cost about $37,000. Good opening for pulp works or paper factory, or other industries requiring waterpower. Number of buildings erected 4; cost $12,500. Amount expended on permanent improvements $1,142. Ch. McArthur, Village Clerk, Burk's Falls.

Burlington, V.—Spray factory started. Owns and operates waterworks; cost $50,000. Good opening for canning works. Number of buildings erected about 10; cost about $12,000. Amount expended on permanent improvements about $3,500. O. T. Springer, Village Clerk, Burlington.

Burpee, Tp.—Good opening for saw and shingle mill and blacksmith shop. No new buildings erected. Amount expended on permanent improvements about $400. Sam. Wright, Township Clerk, Evansville.

Cache Bay, Tn.—Number of buildings erected 3; cost about $2,800. Amount expended on permanent improvements $233. Amount expended on sanitation $35. Fred. Schroeder, Town Clerk, Cache Bay.

Caistor, Tp.—Number of buildings erected 20; cost about $10,000. Amount expended on permanent improvements $2,000. Albert Shields, Township Clerk, Caistorville.

Caledon, Tp.—Good openings for various industries; about 40 horsepower available. Number of buildings erected about 20; cost about $15,000. Amount expended on permanent improvements about $2,500. J. L. Meek, Township Clerk, Alton.

Caledonia, Tp.—Number of buildings erected 4; cost $4,000. Amount expended on permanent improvements $500. R. L. Downing, Township Clerk, Routhier.

Caledonia, V.—Good openings for planing mill and foundry. Number of buildings erected 7; cost about $16,000. Amount expended on permanent improvements $800. Amount expended on sanitation $75. Thos. Hassard, Village Clerk, Caledonia.

Calvin, Tp.—Number of buildings erected 6; cost about $6,000. Amount expended on permanent improvements $1,000 by Government. D. Adams, Township Clerk, Galston.

Cambridge, Tp.—Amount expended on permanent improvements $600. J. B. Sanche, Township Clerk, Casselman.

Camden, E. Tp.—Number of buildings erected 5; cost about $5,000. Amount expended on permanent improvements, $4,722. T. E. McGill, Township Clerk, Centreville.

Cameron, Tp.—Good opening for pulp factory, bobbin factory, or other industries requiring waterpower. No new buildings erected. Amount expended on permanent improvements $600 by Government. S. J. McMeekin, Township Clerk, Mattawa.

Canborough, Tp.—Box factory started. Number of buildings erected 8; cost about $9,000. Amount expended on permanent improvements $10,050. Donald McCallum, Township Clerk, Canboro P.O.

Cannington, V.—Openings for almost any kind of industry. Number of buildings erected 3; cost about $5,000. Amount expended on permanent improvements $1000. Wm. A. Robinson, Village Clerk, Cannington.

Canonto, N. Tp.—See Palmerston, Canonto, N. and S. Tps.

Canonto, S., Tp.—See Palmerston, Canonto, N. and S. Tps.

Caradoc, Tp.—Good openings for canning factory and other industries. Number of buildings erected about 10; cost about $11,000. Amount expended on permanent improvements $5,000. C. H. Lockwood, Township Clerk, Mt. Brydges.

Carden, Tp.—Number of buildings erected 3; cost $3,000. Amount expended on permanent improvements $222. John Walsh, Township Clerk, Kirkfield.

Cardiff, Tp.—Good opening for sawmill. New store erected; cost $1,500. Amount expended on permanent improvements $169. Alfred G. Tate, Township Clerk, Highland Grove.

Cardinal, V.—Number of buildings erected 5; cost about $4,000. Amount expended on permanent improvements $245. Amount expended on sanitation $100. W. Kavanagh, Township Clerk, Cardinal.

Cardwell, Tp.—Number of buildings erected 3; cost about $1,500. Amount expended on permanent improvements $175, exclusive of statute labour. M. Wilson, Township Clerk, Rosseau.

Carleton Place, Tn.—Good opening for any kind of manufacturing industry. Number of buildings erected 3; cost about $6,000. Amount expended on permanent improvements $2,500. A. R. G. Peden, Town Clerk, Carleton Place.

Carling, Tp.—Good opening for tile work. Number of buildings erected 2; cost $4,000. Amount expended on permanent improvements $357. Jas. Crerar, Township Clerk, Shebeshekong.

Carlow, Tp.—Openings for iron and corundum mines. Number of buildings erected 5; cost $5,500. Amount expended on permanent improvements $700. Amount expended on sanitation $150. J. E. Greaves, Township Clerk, Fort Stewart.

Carnarvon, Tp.—Amount expended on permanent improvements $1,880. Vince, Township Clerk, Mindemoya.

Carrick, Tp.—Good openings for furniture factory, canning works and tannery. Number of buildings erected 20; cost $28,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation $50. J. A. Johnston, Township Clerk, Mildmay.

Cartwright, Tp.—Number of buildings erected 4; cost $4,300. Amount expended on permanent improvements $1,100. Amount expended on sanitation $69. Wm. Beacock, Township Clerk, Caesarea.

Casey, Tp.—Two new saw mills started. Good openings for grist mills, mining, etc., with waterpower that can be developed. Number of buildings erected 9; cost about $2,100. R. D. Reavie, Township Clerk, Judge.

Cashel, Tp.—See Tudor and Cashel Tps.

Cassimer, Jennings and Appleby, Tps.—Good openings for grist mill, and carding mill. Number of buildings erected 3; cost about $1,100. Amount expended on permanent improvements $27. Joseph Levert, Township Clerk, St. Charles.

Casselman, V.—Sash and door factory started. Good openings for various industries with water power for electric plant. Number of buildings erected 3; cost $1,500. Amount expended on permanent improvements $677. Amount expended on sanitation $28. Nap. Quenneville, Village Clerk, Casselman.

CAVAN, Tp.—Number of buildings erected 5; cost $4,700. Amount expended on permanent improvements $13,446, including $7,554 for drainage work. Amount expended on sanitation $175. John J. Fair, Township Clerk, Millbrook.

CAYUGA, V.—Good opening for gypsum works. Number of buildings erected 2; cost about $2,000. J. W. Sheppard, Village Clerk, Cayuga.

CAYUGA, N. Tp.—Good opening for creamery, Number of buildings erected 7; cost about $6,200. Amount expended on permanent improvements about $1,000. W. A. McFarlane, Township Clerk, Cayuga.

CAYUGA S. Tp.—Number of buildings erected 2; cost about $3,000. Amount expended on permanent improvements $400. Jas. W. Caughell, Township Clerk, South Cayuga.

CHAMBERLAIN, Tp.—Number of buildings erected about 20; cost about $4,000. Amount expended on permanent improvements $13. A. L. W. Wemyss, Township Clerk, Englehart.

CHAPLEAU, Tp.—Owns and operates waterworks; cost $32,000. Good openings for iron mining and for lumbering. Number of buildings erected about 5; cost $15,000. Amount expended on permanent improvements, $582; amount expended on sanitation $17. R. M. Green, Township Clerk, Chapleau.

CHAPMAN, Tp.—Opening for factories for woodworking; good water powers. Number of buildings erected 6; cost about $10,000. Amount expended on permanent improvements $400. Harry Q. Snuggs, Township Clerk, Magnetawan.

CHAPPLE, Tp.—Good opening for flour mill and box factory. Number of buildings erected 10; cost about $2,000. Amount expended on permanent improvements $3,500. Amount expended on sanitation $30. Everett Kernaham, Township Clerk, Barwick.

CHARLOTTENBURG, Tp.—Number of buildings erected about 9; cost about $4,000. Amount expended on permanent improvements $12,337. Amount expended on sanitation $25. G. H. Macgillivray, Township Clerk, Macgillivray Bridge.

CHARLOTTEVILLE, Tp.—Good opening for fruit evaporator. Number of buildings erected 6; cost about $4,000. Amount expended on permanent improvements $1,600. Amount expended on sanitation $150. R. W. McCall, Township Clerk, Vittoria.

CHATHAM, Tp.—Oil refinery plant started. A. McArthur, Township Clerk, Tupperville.

CHATHAM, C.—Stove factory started. Owns and operates waterworks; value $200,000 and street lighting plant; value $200,000. Good openings for glass factory, sugar beet factory, agricultural implement factory and pork packing establishment. Number of buildings erected 50; cost $112,000. Amount expended on permanent improvements $4,233. Amount expended on sanitation $1,009. W. G. Merritt, City Clerk, Chatham.

CHATSWORTH, V.—Number of buildings erected 2; cost $600. Amount expended on permanent improvements $210. Amount expended on sanitation $10. W. G. Reilly, Village Clerk, Chatsworth.

CHESLEY, Tn.—Chair factory started. Owns and operates waterworks; cost $38,000. Good opening for brass and iron bed factory. Number of buildings erected about 20; cost about $20,100. Amount expended on permanent improvements about $5,000. Amount expended on sanitation $3,500. Wm. McDonald, Town Clerk, Chesley.

CHESTERVILLE, V.—Good openings for sash and door factory, canning works, etc. Number of buildings erected 5; cost about $25,000. Amount expended on

permanent improvements $1,750. Amount expended on sanitation $800. T. T. Shaw, Village Clerk, Chesterville.

CHINGUACOUSY, Tp.—Rural telephone started. Amount expended on permanent improvements about $18,000. Robt. Kee, Township Clerk, Cheltenham.

CHIPPAWA, V.—Factory for aluminum, and smelter for gold, silver, copper and lead started. Owns and operates 10 arc lamps; value $1,000. Good opening for industries requiring electrical power. Number of buildings erected 3; cost about $53,000. Amount expended on permanent improvements over $400. Chas. Weinbrenner, Village Clerk, Chippawa.

CHRISTIE, Tp.—Good opening for woodworking industries. No new buildings erected. Amount expended on permanent improvements about $1,000. James Buchner, Township Clerk, Orrville.

CLARA, Tp.—See Head, Maria and Clara Tps.

CLARENCE, Tp.—Good opening for brickyard. Number of buildings erected about 11; cost about $20,000. Amount expended on permanent improvements $3,290. Amount expended on sanitation $206. Joseph Menard, Township Clerk, The Brook.

CLARENDON AND MILLER, Tps.—New sawmill started. Number of buildings erected 5; cost $2,000. Amount expended on permanent improvements $1,400. J. F. Card, Township Clerk, Plevna.

CLARKE, Tp.—Number of buildings erected about 8; cost about $8,000. Amount expended on permanent improvements $3,443. Amount expended on sanitation $56. John Rickaby, Township Clerk, Orono.

CLIFFORD, V.—Owns and operates acetylene gas lighting plant; value about $3,000. Good opening for planing mill and other industries. Number of buildings erected 3; cost about $6,000. Amount expended on sanitation $15. J. R. Aitcheson, Village Clerk, Clifford.

CLINTON, Tn.—Plant for threshing and baling flax fibre started. Owns and operates waterworks; cost $54,000. Good opening for agricultural machinery factory. Number of buildings erected 2; cost $3,500. Amount expended on permanent improvements $1,200. D. L. Macpherson, Town Clerk, Clinton.

CLYDE, Tp.—See Dysart, etc., Tps.

COBALT, Tn.—Ore sampling plant started. Owns and operates waterworks; cost $75,000. Good opening for concentrator. Number of buildings erected 230; value about $250,000. Amount expended on permanent improvements $30,000. Amount expended on sanitation $30,000. R. L. O'Gorman, Town Clerk, Cobalt.

COBDEN, V.—Good openings for foundry and repair shop, farm tile yard or woodworking factory. One new building erected; cost $500. Amount expended on permanent improvements about $200. Jos. R. Warren, Village Clerk, Cobden.

COBOURG, Tn.—Number of buildings erected 25; cost $150,000. Amount expended on permanent improvements $5,504. D. H. Minaker, Town Clerk, Cobourg.

COCKBURN ISLAND, Tp.—No new buildings erected. Amount expended on permanent improvements $550. A. Monck, Township Clerk, Cockburn Island.

COLBORNE, Tp.—Chopping mill and grain warehouse, and a sawmill started. Good opening for blacksmith and for woodworker. Number of buildings erected 5; cost about $6,000. Amount expended on permanent improvements $2,000. F. W. McDonagh, Township Clerk, Carlow.

COLBORNE, V.—Owns and operates waterworks for fountain and street sprinkling; cost $439. Number of buildings erected 3; cost $4,922. Amount expended on permanent improvements $1,827. Amount expended on sanitation $77. Geo. Keyes, Village Clerk, Colborne.

COLCHESTER N., Tp.—Good opening for brick or tile yard. Number of buildings erected about 10; cost about $8,000. Amount expended on permanent improvements $15,000. A. C. Atkinson, Township Clerk, Gesto.

COLCHESTER S., Tp.—Good opening for canning factory. Amount expended on permanent improvements $2,300. J. H. Madill, Township Clerk, Harrow.

COLDWATER, V.—Good openings for woodenware factory, brick, tile and sewer pipe yard, and cheese factory. Number of buildings erected 3; cost about $8,200. Amount expended on permanent improvements $1,000. J. R. Russell, Village Clerk, Coldwater.

COLEMAN, Tp.—Good opening for foundry. Number of buildings erected ....; cost about $1,000,000. Amount expended on permanent improvements $34,699. Amount expended on sanitation $223. P. J. Hart, Township Clerk, Cobalt.

COLLINGWOOD, Tn.—Owns and operates waterworks; cost $72,974; electric light, cost $28,813; street lighting $4,551; power plant $6,000. Good opening for woodworking industries. Number of buildings erected 59; cost about $78,175. Amount expended on permanent improvements $5,148. Amount expended on sanitation $56,000 for sewers. J. H. Duncan, Town Clerk, Collingwood.

COLLINGWOOD, Tp.—Good openings for woollen mills or knitting factory; good water power. Number of buildings erected 11; cost $7,700. Amount expended on permanent improvements $3,518. Edw. Rorke, Township Clerk, Clarksburg.

COPPER CLIFF, Tn.—One building erected, cost $5,000. Amount expended on permanent improvements $567. Amount expended on sanitation $270. Thos. Stoddart, Town Clerk, Copper Cliff.

CORNWALL, Tn.—Owns and operates waterworks; cost $139,740. Good openings for various industries, with plenty of power, and shipping facilities by water and rail. Number of buildings erected 7; cost $25,500. Amount expended on permanent improvements $6,290. Amount expended on sanitation $1,370. Geo. S. Jarvis, Town Clerk, Cornwall.

CORNWALL, Tp.—Good opening for hardware and agricultural implement factory and cement works. Number of buildings erected 20; cost $30,000. Amount expended on permanent improvements $10,000. Amount expended on sanitation $700. John Mullen, Township Clerk, Cornwall Centre,

COURTRIGHT, V.—Good openings for industries requiring rail or water facilities. No new buildings erected. Amount expended on permanent improvements $864. R. G. Stewart, Village Clerk, Courtright.

CRAMAHE, Tp.—Amount expended on permanent improvements $2,400. Amount expended on sanitation $45. C. A. Wilson, Township Clerk, Castleton.

CREEMORE, V.—Owns and operates waterworks; cost $22,000. Number of buildings erected 5; cost $7,000. Amount expended on permanent improvements $650. A. H. Watson, Village Clerk, Creemore.

CROSBY N., Tp.—Number of buildings erected 3; cost $7,000. Amount expended on permanent improvements $563. Wm. McKnight, Township Clerk, Westport.

CROSBY S., Tp.—Amount expended on permanent improvements $1,756. J. R. Dargavel, Township Clerk, Elgin.

CROZIER, Tp.—See Alberton and Crozier Tps.

CULROSS, Tp.—Number of buildings erected about 20; cost about $12,000. Amount expended on permanent improvements $2,027. Amount expended on sanitation $47. Chas. Button, Township Clerk, Teeswater.

CUMBERLAND, Tp.—Provender and grist mill started. Good opening and site for sawmill with water and rail shipping facilities. Number of buildings erected 9; cost about $6,500. Amount expended on permanent improvements $4,000. W. W. Dunning, Township Clerk, Cumberland.

DALHOUSIE AND N. SHERBROOKE, Tps.—Good openings for industry using hardwood and needing electric power. Number of buildings erected 5; cost about $5,500. Amount expended on permanent improvements $800. Walter Geddes, Township Clerk, Dalhousie Lake.

DALTON, Tp.—No new buildings were erected. Amount expended on permanent improvements $175. Alex. Montgomery, Township Clerk, Sebright.

DARLING, Tp.—Marble works started. Openings for mining. No new buildings. Amount expended on permanent improvements $200. Jas. H. Rintoul, Township Clerk, Tatlock.

DAWN, Tp.—Number of buildings erected 6; cost $4,500. Amount expended on permanent improvements $500. J. M. Webster, Township Clerk, Rutherford.

DAY AND BRIGHT ADDITIONAL, Tps.—Good openings for furniture factories and other woodworking industry with plenty of material and power. Number of buildings erected 4; cost $3,000. Amount expended on permanent improvements $100. Ch. Cavanagh, Township Clerk, Sowerby.

DELAWARE, Tp.—Sawmill, cement block works, electrical appliance factory, and watchmaking started. Good opening for mineral bath and sanitarium. Number of buildings erected 7; cost $5,500. Amount expended on permanent improvements $4,992. Amount expended on sanitation $35. J. H. Matthews, Township Clerk, Delaware.

DELHI, V.—Good opening for various industries, with electric power, natural gas, etc. Number of buildings erected 2; cost $700. Amount expended on permanent improvements $1,780. Roger Crysler, Village Clerk, Delhi.

DENBIGH, ABINGER AND ASHBY, Tps.—Cheese factory built ready to operate. Number of buildings erected 10; cost $2,200. Amount expended on permanent improvements $146. Paul Stein, Township Clerk, Denbigh.

DENISON.—See Drury, Denison and Graham Tps.

DERBY, Tp.—Amount expended on permanent improvements $2,854. Amount expended on sanitation $150. Wm. Beaton, Township Clerk, Owen Sound.

DEREHAM, Tp.—Good opening for tile and brick yard. Amount expended on permanent improvements $13,000, municipal drains; $8,500 on roads and bridges, besides 5,904 days statute labour. Alex. Bell, Township Clerk, Verschoyle.

DESERONTO, Tn.—A match factory, two jewellers and two grocers started. Owns and operates waterworks, cost $35,000; gas works $50,000. Good opening for sash and door factory and other industries. No new buildings erected. Amount expended on permanent improvements about $2,000. Amount expended on sanitation about $1,500. Henry R. Bedford, Town Clerk, Deseronto.

DILKE, Tp.—Saw and planing mill started. Good opening for brick yard. Number of buildings erected 6; cost $6,000. Amount expended on permanent improvements $1,735. Frank Longmore, Township Clerk, Pinewood.

DORCHESTER S., Tp.—Good opening for furniture factory. Number of buildings erected 11; cost $17,000. Amount expended on permanent improvements $5,062. D. Taylor, Township Clerk, Belmont.

DOURO, Tp.—Number of buildings erected 8; cost $7,000. Amount expended on permanent improvements $1,700. J. J. Allen, Township Clerk, Douro.

DOVER, Tp.—Good opening for flour mill or sugar-beet factory. Number of buildings erected 7; cost $7,000. Amount expended on permanent improvements

$1,500. Amount expended on sanitation $200. John Welsh, Township Clerk, 94 Grand Ave. W., Chatham.

Downie, Tp.—Number of buildings erected 5; cost about $10,000. Amount expended on permanent improvements $8,503. Amount expended on sanitation about $100. P. Smith, Township Clerk, Stratford.

Draper, Tp.—Openings for various industries with two good water powers. Frame barn erected; cost about $600. Amount expended on permanent improvements $1,500. D. Cairns, Township Clerk, Uffington.

Drayton, V.—Good openings for brick yard, flax mill and for foundry and machine shop. No new buildings erected. Amount expended on permanent improvements $876. Amount expended on sanitation $180. A. C. Woodman, Village Clerk, Drayton.

Dresden, Tn.—New flour mill started. Owns and operates electric light plant; value $13,000. Openings for any kind of industry. Number of buildings erected 3; cost $19,500. Amount expended on permanent improvements $1,909. Amount expended on sanitation $223. Arthur Smith, Town Clerk, Dresden.

Drummond, Tp.—Good opening for industries with excellent water power on Mississippi River. Amount expended on permanent improvements $1,580. Amount expended on sanitation $31. E. R. Stedman, Township Clerk, Richardson.

Drury, Denison and Graham, Tps.—Owns and operates street lights at Victoria Mines, costing $226, current supply free by Mond Nickel Co. Number of buildings erected 8; cost $5,000. Amount expended on permanent improvements $2,408. Amount expended on sanitation $166. R. B. Colloton, Township Clerk, Victoria Mines.

Dryden, Tn.—Pulp mill being erected. Good openings for grist mill, box factory, pill box factory, etc., with good water power. Number of buildings erected 23; cost $60,000. Amount expended on permanent improvements about $3,000. Amount expended on sanitation about $100. A. L. Orvis, Town Clerk, Dryden.

Dudley, Tp.—See Dysart, etc., Tps.

Dumfries N., Tp.—Number of buildings erected 10; cost about $6,000. Amount expended on permanent improvements $2,824. Amount expended on sanitation $190. Joseph Whigley, Township Clerk, Ayr.

Dumfries S., Tp.—Amount expended in permanent improvements $3,942. Amount expended on sanitation $110. Wm. Fleming, Township Clerk, Glenmorris.

Dummer, Tp.—Amount expended on permanent improvements $1,062. Amount expended on sanitation $72. Rich. Deen, Township Clerk, Warsaw.

Dundalk, V.—Owns and operates electric light plant; cost $8,000. Good openings for furniture factory, planing mill, and foundry and machine shop. Number of buildings erected 5; cost $8,000. Amount expended on permanent improvements $1,000. M. W. Ridley, Village Clerk, Dundalk.

Dundas, Tn.—Owns and operates waterworks; cost $58,981. Good openings for almost any industry. Number of buildings erected 12; cost $35,000. Amount expended on permanent improvements $4,679. Amount expended on sanitation $1,279. John S. Fry, Town Clerk, Dundas.

Dungannon, Tp.—Marble quarry started. Good openings for mining industries. Number of buildings erected 3; cost $2,300. Amount expended on permanent improvements $678. John Munro, Township Clerk, Turriff.

Dunn, Tp.—Good openings for brick yard and lime kiln. Number of buildings erected 4; cost $4,000. Amount expended on permanent improvements $200. Amount expended on sanitation $9. David Lyons, Township Clerk, Byng.

Dunnville, Tn.—Telephone manufactory started. Owns and operates waterworks; cost $31,000. Good openings for any factories, which will be treated liberally. Number of buildings erected about 20; cost about $40,000. Amount expended on permanent improvements $1,210. Amount expended on sanitation $118 by Board of Health; sewers under construction. J. W. Holmes, Town Clerk, Dunnville.

Durham, Tn.—Oat meal mill and elevator, and sash and door factory started. Good openings for iron bed factory, chair factory, etc. Number of buildings erected 6; cost about $14,000. Amount expended on permanent improvements about $1,000. W. B. Vollet, Town Clerk, Durham.

Dutton, V.—Good openings for factory for baskets and small woodenware, marble works and canning factory. Number of buildings erected 4; cost about $6,000. Amount expended on permanent improvements about $400. Amount expended on sanitation about $150. J. D. Blue, Village Clerk, Dutton.

Dymond, Tp.—Portable sawmill and threshing machine with blower started. Number of buildings erected about 4; cost about $3,000. Amount expended on permanent improvements $4,989. E. F. Stephenson, Township Clerk, Liskeard.

Dysart, Etc., Tps.—Good openings for sawmill, shingle, lath, stave and heading factories, furniture factory, chemical works, etc. Number of buildings erected 18; cost $9,000. Amount expended on permanent improvements $7,000, including $3,500 for steel bridge. G. H. Potts, Township Clerk, Haliburton.

Easthope N., Tp.—Number of buildings erected 15; cost about $3,000. Amount expended on permanent improvements $18,000. J. D. Fisher, Township Clerk, Amulree.

Easthope S., Tp.—Good opening for tile yard. Number of buildings erected about 18; cost about $20,000. Amount expended on permanent improvements about $2,500. V. Stock, Township Clerk, Tavistock.

Eastnor, Tp.—Good opening for brick and tile yard. Number of buildings erected 5; cost $9,600. Amount expended on permanent improvements $860. Wm. Laidlaw, Township Clerk, Lion's Head.

Eastview, V.—Planing mill and warehouse for steel girders started. Openings for industries of all kinds with good railroad accommodation. Number of buildings erected about 50; cost about $15,000. Amount expended on permanent improvements $1,200. Henry R. Washington, Village Clerk, Cumming's Bridge.

Effingham, Tp.—See Kaladar, Anglesea and Effingham Tps.

Egansville, V.—Openings for industries, with water power available. Number of buildings erected 3; cost $9,200. Amount expended on permanent improvements $2,090. Amount expended on sanitation $635. Jas. R. Campbell, Township Clerk, Egansville.

Egremont, Tp.—Good opening for barrel factory. Number of buildings erected 9; cost about $10,000. Amount expended on permanent improvements $2,086, including $207 Government Grant, David Allan, Township Clerk, Holstein.

Ekfrid, Tp.—Good openings for waggon shop and bakery. Number of buildings erected 18; cost $4,500. Amount expended on permanent improvements $5,432. A. P. McDougald, Township Clerk, Melbourne.

Elderslie, Tp.—Number of buildings erected 8; cost $10,500. Amount expended on permanent improvements $1,780. Amount expended on sanitation $29. J. C. McIntyre, Township Clerk, Paisley.

ELDON, Tp.—Number of buildings erected 10; cost $11,100. Amount expended on permanent improvements $3,028. B. Stacey, Township Clerk, Lorneville.

ELIZABETHTOWN, Tp.—Amount expended on permanent improvements $5,384. J. B. Barry, Township Clerk, New Dublin.

ELLICE, Tp.—Good openings for harness shop and shoe shop. Number of buildings erected 25; cost $16,875. Amount expended on permanent improvements $2,779. Justus Kreuter, Township Clerk, Rostock.

ELMA, Tp.—Good opening for sash and door factory. Number of buildings erected 14; cost $15,000. Amount expended on permanent improvements $14,000, including $9,500 for municipal drainage. Geo. Lochhead, Township Clerk, Atwood.

ELMIRA, V.—Comb and button factory started. Owns and operates waterworks; cost $28,000. Good openings for almost any kind of industry, except furniture. Number of buildings erected 19; cost $28,000. Amount expended on permanent improvements $2,146. J. H. Ruppel, Village Clerk, Elmira.

ELMSLEY N., Tp.—Number of buildings erected 24; cost $4,000. Amount expended on permanent improvements, $309. Amount expended on sanitation $20. R. M. Imeson, Township Clerk, Perth.

ELMSLEY S., Tp.—Good opening for bakery. Number of buildings erected 5; cost $2,000. Amount expended on permanent improvements $1,383. John Rabb, Township Clerk, Lombardy.

ELORA, V.—Number of buildings erected 2; cost $9,000. Amount expended on permanent improvements $350. Henry Clarke, Village Clerk, Elora.

EMBRO, V.—Apple evaporator started. Good openings for tile yard, machine shop, laundry and photographer. Number of buildings erected 2; cost $3,000. Amount expended on permanent improvements $400. E. J. Cody, Village Clerk, Embro.

EMILY, Tp.—Number of buildings erected 9; cost $8,000. Amount expended on permanent improvements $2,120. R. J. Kennedy, Township Clerk, Omemee.

EMO, Tp.—Good opening for butcher shop, printing office, etc. Amount expended on permanent improvements $3,845. B. L. Phillips, Township Clerk, Emo.

ENNISKILLEN, Tp.—Amount expended on permanent improvements about $7,000. Amount expended on sanitation $56. G. V. Wyant, Township Clerk, Petrolea.

ERAMOSA, Tp.—Number of buildings erected about 20; cost about $20,000. Amount expended on permanent improvements about $600. Amount expended on sanitation about $90. W. M. Head, Township Clerk, Guelph.

ERIN, Tp.—Amount expended on permanent improvements $5,597. Amount expended on sanitation $35. Thos. Young, Township Clerk, Erin.

ERIN, V.—No new buildings erected. Amount expended on permanent improvements about $1,200. Wm. Conboy, Village Clerk, Erin.

ERNESTTOWN, Tp.—Amount expended on permanent improvements $2,489. E. O. Clark, Township Clerk, Odessa.

ESCOTT, FRONT, Tp.—Stone quarries started. Number of buildings erected 5; cost $4,800. Amount expended on permanent improvements $629. F. T. Hutcheson, Township Clerk, Escott.

ESCOTT, REAR, Tp.—See Yonge and Escott Rear Tps.

ESQUESING, Tp.—Good opening for cheese factory and creamery, or industry requiring 15 or 20 h.p. (water) with mill available. Number of buildings erected 10; cost $20,000. Amount expended on permanent improvements $8,179, including $4,753 county good roads. J. H. Tracy, Township Clerk, Esquesing.

Essa, Tp.—Number of buildings erected 4; cost $5,400. Amount expended on permanent improvements $1,000. Amount expended on sanitation $125. John Coxworth, Township Clerk, Ivy.

Essex, Tn.—Owns and operates waterworks, cost $33,000. Number of buildings erected 6; cost $12,500. Amount expended on permanent improvements $600. Geo. E. Wightman, Town Clerk, Essex.

Etobicoke, Tp.—Brass rolling mill started. Openings for any kind of industry with good railway facilities. Number of buildings erected about 120; cost about $120,000. Amount expended on permanent improvements $25,500. Sewerage system in construction at New Toronto to cost $14,000. J. A. L. Macpherson, Township Clerk, Islington.

Euphemia, Tp.—A blacksmith's shop and a general store started. Number of buildings erected 13; cost $10,950. Amount expended on permanent improvements $3,004. D. M. Smith, Township Clerk, Cairo.

Euphrasia, Tp.—Number of buildings erected about 10; cost about $5,000. Amount expended on permanent improvements $2,414. N. L. Curry, Township Clerk, Rocklyn.

Evanturel, Tp.—New saw mill started. Good openings for saw mills and stave mills. Number of buildings erected 8; cost about $3,000. Amount expended on permanent improvements $2,750. P. T. Broome, Township Clerk, Heaslip.

Exeter, V.—Waterworks for fire protection being installed at cost of $22,000. Good openings for small manufactures. Number of buildings erected 4; cost $5,300. Amount expended on permanent improvements $8,300. Amount expended on sanitation $300. Jos. Senior, Village Clerk, Exeter.

Eyre, Tp.—See Dysart, etc., Tps.

Faraday, Tp.—Marble quarries opened. Good openings for cooperage and furniture factory, with suitable timber at hand. No new buildings erected. Amount expended on permanent improvements $641, including $200 Government grant. Walter Wiggins, Township Clerk, Bancroft.

Fenelon, Tp.—Amount expended on permanent improvements $4,147, including $2,270 statute labour. J. B. Powles, Township Clerk, Powles Corners.

Fenelon Falls, V.—Boat building factory started. Owns and operates electric light plant; value $50,000. Good openings for woodenware and woollen factories. Number of buildings erected 4; cost $6,000. Amount expended on permanent improvements about $800. W. T. Junkin, Village Clerk, Fenelon Falls.

Fergus, V.—Good opening for any manufacturing industry; good water power, developed and undeveloped, and two railways. Number of buildings erected 4; cost $8,000. Amount expended in permanent improvments $2,225. James Beattie, Village Clerk, Fergus.

Ferris, Tp.—Good openings for factories or mills, with good water power. No new buildings erected. Amount expended on permanent improvements $1,030. Stanislas Moreau, Township Clerk, Corbeil.

Finch, Tp.—Good opening for manufacturing industries. Number of buildings erected about 25; cost about $30,000. Amount expended on permanent improvements about $2,000. Jas. R. Simpson, Township Clerk, Finch.

Finch, V.—Good opening for manufacturers. No new buildings erected. Amount expended on permanent improvements about $300. Jas. R. Simpson, Village Clerk, Finch.

Fitzroy, Tp.—Good openings for milling. Number of buildings erected about 16; cost about $8,000 Amount expended on permanent improvements about $2,500. A Murphy, Township Clerk, Antrim.

Flamboro' E., Tp.—Number of buildings erected 27; cost $34,800. Amount expended on permanent improvements $3,248. Amount expended on sanitation $112. Jas. A. Walker, Township Clerk, Waterdown.

Flamboro' W., Tp.—Number of buildings erected about 8; cost about $10,000. Amount expended on permanent improvements $1,000, besides 2,000 days' statute labour. Amount expended on sanitation about $140. Ira N. Binkley, Township Clerk, Greensville.

Flos, Tp.—Openings for brick and tile yard, small foundry and cement works. Number of buildings erected 8; cost $11,500, including two schools. Amount expended on permanent improvements $800. C. S. Burton, Township Clerk, Elmvale.

Foley, Tp.—New saw mill started. Good opening for furniture factory and other hardwood industries. One new building erected; cost $500. Amount expended on permanent improvements $495. Andrew Oastler, Township Clerk, James Bay Junction.

Forest, Tn.—Woollen mill and knitting factory started. Good openings for canning factory, basket factory, salt works or pickle factory. Number of buildings erected 3; cost about $3,400. Amount expended on permanent improvements $400. Amount expended on sanitation $900. Rich. Karr, Town Clerk. Forest.

Fort Erie, V.—Planing mill and lumber yard started. Owns and operates lighting plant; cost about $3,700. Good openings for industries, with electric power, natural gas, etc. Number of buildings erected 10; cost about $20,000. Amount expended on permanent improvements $6,000. B. F. Matthews, Village Clerk, Fort Erie.

Fort Frances, Tn.—Owns and operates waterworks, cost $100,000; electric light plant, cost $10,000. Good openings for flour mill, woodworking factories, paper and pulp mills. Number of buildings erected 4 or 5; cost $10,000. Amount expended on permanent improvements $2,500. Amount expended on sanitation $15,000. W. H. Elliott, Town Clerk, Fort Frances.

Fort William, C.—Woodworking factory started. Owns and operates waterworks; value $701,839; electric light value $170,000; telephone $139,485; street railway (with Port Arthur), $244,500. Good openings for furniture factory, implement factory, boat building, biscuit factory, car works, wire works and market gardening. Number of buildings erected 729; cost $2,970,365. Amount expended on permanent improvements $100,321. Amount expended on sanitation $212,695. A. McNaughton, City Clerk, Fort William.

Fredericksburgh N., Tp.—New mill for grinding feed started. Number of buildings erected 2; cost $1,500. J. M. Joyce, Township Clerk, Little Creek.

Fredericksburgh S., Tp.—Number of buildings erected 2; cost $3,000. Amount expended on permanent improvements $1,862. Wm. H. Rikely, Township Clerk, Hayburn.

Fullarton, Tp.—Opening for electric railway. Amount expended on permanent improvements $4,633. John Wilson, Township Clerk, Fullarton.

Gainsborough, Tp.—Good opening for industries requiring electric power. Number of buildings erected 10; cost about $15,000. Amount expended on permanent improvements $750. S. Kennedy, Township Clerk, St. Ann's.

Galt, Tn.—Edge tool factory, potato machinery factory, shoemakers' lasts factory, iron foundry and cement vase works started. Owns and operates waterworks; cost $204,189. Good opening for iron works, furniture factory, shoe factory, knitting and woollen mills, and other industries requiring electric power. Number of

buildings erected 70; cost about $100,000. Amount expended on permanent improvements $13,500. Amount expended on sanitation $15,000. Jos. McCartney, Town Clerk, Galt.

GANANOQUE, Tn.—Owns and operates waterworks; cost about $160,000. Good opening for various industries, with good water power and excellent shipping facilities by water or rail. Number of buildings erected 15; cost $31,550. Amount expended on sanitation about $200. S. McCammon, Town Clerk, Gananoque.

GARAFRAXA, E., Tp.—Amount expended on permanent improvements $3,000. Amount expended on sanitation $34. John Preston, Township Clerk, Marsville.

GARAFRAXA W., Tp.—Number of buildings erected 6; cost about $12,000. Amount expended on permanent improvements $5,189, including 30 foot span cement bridge. Amount expended on sanitation $48. Thos. Goodall, Township Clerk, Belwood.

GARDEN ISLAND, V.—No buildings erected. Amount expended on permanent improvements $450. Thos. Lappen, Township Clerk, Garden Island.

GARSON, Tp.—See Neelon and Garson Tps.

GEORGETOWN, V.—Owns and operates waterworks; cost $40,000. Openings for various industries, with good shipping and other facilities. Number of buildings erected 7; cost $12,000. Amount expended on permanent improvements $4,651. H. W. Kennedy, Village Clerk, Georgetown.

GEORGINA, Tp.—Number of buildings erected 7; cost $7,000. Amount expended on permanent improvements $1,600. Donald Ego, Township Clerk, Virginia.

GLAMORGAN, Tp.—Good water power for various industries. Number of buildings erected 2; cost about $500. Amount expended on permanent improvements about $60. S. S. Hadley, Township Clerk, Gooderham.

GLANFORD, Tp.—No new buildings erected. Amount expended on permanent improvements $1,311. Amount expended on sanitation $60. Daniel Reed, Township Clerk, Glanford.

GLENELG, Tp.—Lumber mill and sash and door factory started. Number of buildings erected 9; cost about $6,000. Amount expended on permanent improvements $2,900. J. S. Black, Township Clerk, Pomona.

GLOUCESTER, Tp.—Brick and tile yard started. Good opening for peat industry. Amount expended on permanent improvements about $5,000. H. B. Billings, Township Clerk, Billings Bridge.

GODERICH, Tn.—Engine and boiler works, road machinery factory and saw mill started. Owns and operates waterworks and electric light plant; value $127,493. Good openings for canning plant, chair factory, pottery, carriage factory, and other industries. Number of buildings erected 13; cost $16,500. Amount expended on permanent improvements $3,414. Amount expended on sanitation $3,089. L. L. Knox, Town Clerk, Goderich.

GODERICH, Tp.—Number of buildings erected 5; cost about $5,000. Amount expended on permanent improvements about $3,000. N. M. Trewartha, Township Clerk, Holmesville.

GORDON, Tp.—Good openings for cheese factory, creamery, or sugar beet factory. Number of buildings erected 3; cost $3,000. Amount expended on permanent improvements $1,450. John Gibson, Township Clerk, Gore Bay.

GORE BAY, Tn.—Good harbour for large saw mill. Number of buildings erected 6; cost about $14,000. Amount expended on permanent improvements $600. J. W. Kinney, Town Clerk, Gore Bay.

GOSFIELD N., Tp.—Owns and operates municipal telephone system with 170 'phones, 140 miles of poles and wire; good connections, including long distance; cost about $8,000. Good openings for canning factory and pickle factory. Number of buildings erected 29; cost about $12,500. Amount expended on permanent improvements $17,500, including expenditure on drainage. Amount expended on sanitation $69. Isaac Jackson, Township Clerk, Cottam.

GOSFIELD S., Tp.—Number of buildings erected about 10; cost about $15,000. Amount expended on permanent improvements $4,013. G. W. Coatsworth, Township Clerk, Kingsville.

GOULBURN, Tp.—Number of buildings erected 6; cost about $8,200. Amount expended on permanent improvements $1,600. J. A. Cummings, Township Clerk, Hazledean.

GOWER N., Tp.—Number of buildings erected 4; cost $5,300. Amount expended on permanent improvements $2,535. Jas. E. Craig, Township Clerk, North Gower.

GOWER S., Tp.—No new buildings erected. Amount expended on permanent improvements $541. Amount expended on sanitation $15. Elijah Pelton, Township Clerk, South Gower.

GRAHAM, Tp.—See Drury, Denison and Graham Tps.

GRAND VALLEY, V.—Number of buildings erected 3; cost $6,000. Wm. McIntyre, Village Clerk, Grand Valley.

GRANTHAM, Tp.—Number of buildings erected about 10; cost about $7,000. Amount expended on permanent improvements $1,911. Amount expended on sanitation $15. L. S. Bessey, Township Clerk, St. Catharines.

GRATTAN, Tp.—Good opening for lime quarry alongside G. T. R. Number of buildings erected about 4; cost about $1,000. Amount expended on permanent improvements $296. Amount expended on sanitation $115. John George, Township Clerk, Eganville.

GRAVENHURST, Tn.—Owns and operates waterworks; cost $20,000; hydro-electric power plant, cost $60,000. Good openings for woodworking industries. Number of buildings erected 2; cost about $3,000. W. H. Cross, Town Clerk, Gravenhurst.

GREENOCK, Tp.—Amount expended on permanent improvements $3,957. Thos. H. Purdy, Township Clerk, Narva.

GREY, Tp.—Good openings for manufacture of tiles and cement pipes. Number of buildings erected 4; cost $4,000. Amount expended on permanent improvements $3,000. A. H. Macdonald, Township Clerk, Ethel.

GRIFFITH AND MATAWATCHAN, Tps.—Amount expended on permanent improvements $44. Edward Godin, Township Clerk, Griffith.

GRIMSBY, V.—Factories for specialties and for gasoline engines and spraying outfits started. Small stove output added to factory. Material for basket factory ready. Owns and operates waterworks; cost about $50,000. Openings for various industries with good sites and electric power. Number of buildings erected 44;

cost about $76,000. Expended on permanent improvements about $4,000. Jas. Brodie, Village Clerk, Grimsby.

GRIMSBY S., Tp.—Number of buildings erected 3; cost $2,500. Amount expended on permanent improvements $1,185. F. W. Roberts, Township Clerk, Smithfield.

GUELPH, C.—Owns and operates waterworks, cost $323,965; gas works, power and electric light plant, cost $383,145, and street railway, cost $122,450, besides owning Guelph Junction Railway, cost $186.750, operated by C. P. R. Openings for almost any kind of industry. Number of buildings erected 77; cost $127,625. Amount expended on permanent improvements $93,090. Amount expended on sanitation $20,995. T. J. Moore, City Clerk, Guelph.

GUELPH, Tp.—Amount expended on permanent improvements $5,294. Jas. Laidlaw, Township Clerk, Guelph.

GUILFORD, Tp.—See Dysart, etc., Tps.

GWILLIMBURY E., Tp.—Number of buildings erected about 13; cost about $11,000. Amount expended on permanent improvements $3,577. Amount expended on sanitation $165. A. R. Mackenzie, Township Clerk, Queensville.

GWILLIMBURY N., Tp.—Number of buildings erected about 20; cost about $17,000. Amount expended on permanent improvements $1,187. Henry Sennett, Township Clerk, Belhaven.

GWILLIMBURY W., Tp.—No new buildings erected. Amount expended on permanent improvements $1,450. E. J. Evans, Township Clerk, Bradbury.

HAGAR, Tp.—New saw mill started. Good opening for cheese factory. Number of buildings erected 2; cost $1,200. Amount expended on permanent improvements $2,045. T. A. Millichamp, Township Clerk, Markstay.

HAGERMAN, Tp.—Openings for industries requiring hardwood. Number of buildings erected 3; cost about $1,000. Amount expended on permanent improvements $785, including $600 by Government. F. W. McFie, Township Clerk, Dunchurch.

HAGERSVILLE, V.—Sash and door factory, sawmill, fruit evaporator, and roller flour mill started. Good opening for grist mill. Number of buildings erected 10; cost about $19,000. John H. Scott, Village Clerk, Hagersville.

HAILEYBURY, Tn.—Owns and operates waterworks; cost $65,000. Good openings for foundry and machine shop, saw mill and pulp factory. Number of buildings erected about 130; cost about $300,000. Amount expended on permanent improvements $13,357. Amount expended on sanitation $30,405. Theo. H. Connor, Town Clerk, Haileybury.

HALDIMAND, Tp.—Number of buildings erected about 30; cost about $25,000. Amount expended on permanent improvements $3,310. Amount expended on sanitation $103. R. Lawless, Township Clerk, Grafton.

HALLAM, Tp.—Number of buildings erected 2; cost $1,100. Amount expended on permanent improvements $497, including $400 by Government. Jas. H. Toland, Township Clerk, Webbwood.

HALLOWELL, Tp.—Amount expended on permanent improvements $1,413. E. B. Yarwood, Township Clerk, Picton.

HAMILTON, C.—Hardware supply company, foundry and carriers company started. Good openings for almost any kind of industry, with every facility. Owns and operates waterworks; cost $2,528,306. Number of buildings erected 730;

cost $1,547,425. Amount expended on permanent improvements $127,925. Amount expended on sanitation $65,795. S. H. Kent, City Clerk, Hamilton.

HAMILTON, Tp.—Number of buildings erected about 8; cost about $10,000. Amount expended on permanent improvements $5,472. Amount expended on sanitation $380. J. D. Stewart, Township Clerk, Cobourg.

HANMER, Tp.—New saw mill started. Good opening for grist mill and cheese or butter factory. Number of buildings erected 8; cost $3,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation $250. J. A. Brunel, Township Clerk, Hanmer.

HANOVER, Tn.—Furniture factory, chair factory, upholstery factory, shirt factory, and brush and broom factory started. Owns and operates waterworks; cost $31,000. Good openings for boot and shoe factory, iron or metal ware, machine shop, etc. Number of buildings erected 11; cost about $21,700. Amount expended on permanent improvements $3,565. Amount expended on sanitation about $300. John Taylor, Town Clerk, Hanover.

HARBURN, Tp.—See Dysart, etc., Tps.

HARCOURT, Tp.—See Dysart, etc., Tps.

HARLEY, Tp.—Three new saw mills started. Number of buildings erected 10; cost about $2,000. Amount expended on permanent improvements about $3,000. Edgar Cragg, Township Clerk, Hanbury.

HARRISTON, Tn.—Casket factory started. Good opening for light manufacturing industries. One building erected; cost about $1,500. Amount expended on permanent improvements $700. A. J. Stewart, Town Clerk, Harriston.

HARROW, Tp.—See Salter, etc., Tps.

HARVEY, Tp.—Good openings for lime kiln and industries requiring wood. Number of buildings erected 2; cost about $2,000. Amount expended on permanent improvements $1,550, including $350 by County for bridge and $800 by Government. David Weir, Township Clerk, Lakehurst.

HARWICH, Tp.—Good opening for canning factory. Number of buildings erected 10; cost about $10,000. Amount expended on permanent improvements $12,000. Amount expended on sanitation $179. Geo. W. Riseborough, Township Clerk, Blenheim.

HASTINGS, V.—Openings for any kind of manufacturing. Number of buildings erected 2; cost $3,000. Amount expended on permanent improvements $1,500. A. Wilson, Hastings.

HAVELOCK, Tp.—See Dysart, etc., Tps.

HAVELOCK, V.—Good openings for factories for furniture or other wooden articles. Number of buildings erected 6; cost $16,700. Amount expended on permanent improvements $1,193. J. W. Bryans, Village Clerk, Havelock.

HAWKESBURY, Tn.—Owns and operates waterworks; cost $110,000. Openings for foundry and wooden industries, with good shipping facilities by rail and water. Number of buildings erected 3; cost about $24,000. Denis Doyle, Town Clerk, Hawkesbury.

HAWKESBURY E., Tp.—Number of buildings erected 15; cost about $8,000. Amount expended on permanent improvements $2,500, including $750 for sidewalks in St. Eugene Village. Nap. Labrosse, Township Clerk, St. Eugene.

HAWKESBURY W., Tp.—Good openings for brick yard and woodworking industries. Number of buildings erected 18; cost about $10,000. Amount expended

on permanent improvements $2,500. W. I. Dunning, Township Clerk, Vankleek Hill.

HAY, Tp.—Number of buildings erected 6; cost $10,000. Amount expended on permanent improvements about $3,000. Fred. Hess, Sr., Township Clerk, Zurich.

HEAD, MARIA AND CLARA, Tps.—No new buildings erected. Amount expended on permanent improvements $25. H. Beauchamp, Township Clerk, Deux Rivieres.

HENSALL, V.—Opening for boot and shoe factory. Number of buildings erected 2; cost $6,000. Amount expended on permanent improvements $800. Amount expended on sanitation $1,560 for sewers and drainage. Robt. Bouthron, Village Clerk, Hensall.

HEPWORTH, V.—Good openings for chair factory, waggon factory, or furniture factory, and dairy or cheese factory. No new buildings erected. Amount expended on permanent improvements $217. W. R. White, Village Clerk, Hepworth.

HERSCHEL, Tp.—See Monteagle and Herschel Tps.

HESPELER, Tn.—Owns and operates electric light plant; cost $15,000. Openings for various industries with buildings available. Number of buildings erected 15; cost $60,000. Amount expended on permanent impovements $16,500. W. Brewster, Town Clerk, Hespeler.

HIBBERT, Tp.—Amount expended on permanent improvements $715. James Jordan, Township Clerk, Dublin.

HILLIER, Tp.—Openings for shoemaker, dressmaker, and bakery. Number of buildings erected about 4; cost about $4,000. Amount expended on permanent improvements $478. Steph. Nease, Township Clerk, Hillier.

HILTON, Tp.—Good openings for factories for furniture or other wooden ware. Number of buildings erected 3; cost $1,000. Amount expended on permanent improvements $1,100. W. E. Whybourne, Township Clerk, Marksville.

HIMSWORTH N., Tp.—Good opening for planing mill and for factory. Number of buildings erected 2; cost $4,500. Amount expended on permanent improvements $1,010. J. R. Moon, Township Clerk, Callander.

HIMSWORTH S., Tp.—Opening for various industries with undeveloped water power. Number of buildings erected 5; cost about $4,000. Amount expended on permanent improvements $497. Amount expended on sanitation $24. A. Oldfield, Township Clerk, Powassan.

HINCHINBROOKE, Tp.—Openings for harnessmaker and shoemaker. Number of buildings erected 6; cost about $4,000. Amount expended on permanent improvements about $2,500, including Government grant. Geo. A. Smith, Township Clerk, Parham.

HINDON, Tp.—See Anson and Hindon Tps.

HOLLAND LANDING, V.—Openings for any kind of manufacturing, with good water facilities. No new buildings erected. Amount expended on permanent improvements $300. F. J. Sheppard, Village Clerk, Holland Landing.

HOPE, Tp.—Number of buildings erected 14; cost $10,500. Amount expended on permanent improvements $900. Thos. Roberts, Township Clerk, Welcome.

HOUGHTON, Tp.—Good openings for brick and tile yard and blacksmith's shop. Number of buildings erected 6; cost $8,500. Amount expended on permanent improvements $2,530. Jas. Boyd, Township Clerk, Glenmeyer.

Howard, Tp.—Number of buildings erected 4; cost about $1,500. Amount expended on permanent improvements $4,000. Amount expended on sanitation $200. G. W. McDonald, Township Clerk, Ridgetown.

Howe Island, Tp.—Number of buildings erected 2; cost $1,200. F. J. Lachance, Township Clerk, D'Arcy.

Howick, Tp.—No new buildings erected. Amount expended on permanent improvements $7,729. Amount expended on sanitation $78. L. Walker, Township Clerk, Gorrie.

Howland, Tp.—No new buildings erected. Amount expended on permanent improvements $150. F. W. Major, Township Clerk, Sheguiandah.

Hudson, Tp.—Two large saw mills and two portable saw mills started. Good opening for brick yard. Number of buildings erected 7; cost $6,500. Amount expended on permanent improvements $28,000. E. Sackrider, Township Clerk, Hillview.

Hullett, Tp.—Good openings for butter and cheese factories. Number of buildings erected 2; cost $3,500. Amount expended on permanent improvements $5,400, besides 2,800 days' statute labour. Jas. Campbell, Township Clerk, Londesboro.

Humberstone, Tp.—Agricultural implement factory started. Good openings for industries, with electric power and natural gas. Number of buildings erected 21; cost $70,000. Amount expended on permanent improvements $2,356. Amount expended on sanitation $101. A. E. Near, Township Clerk, Gas Line P.O.

Humphrey, Tp.—Number of buildings erected 7; cost $5,000. A. A. Young, Township Clerk, Rosseau.

Hungerford, Tp.—Mine started. Good openings for carriage factory and canning works. Number of buildings erected 20; cost $35,000. Amount expended on permanent improvements $2,000. Geo. H. Stokes, Township Clerk, Tweed.

Huntingdon, Tp.—Good opening for canning factory. Number of buildings erected about 6; cost about $5,000. Amount expended on permanent improvements $355. Jas. Haggerty, Township Clerk, West Huntingdon.

Huntley, Tp.—Cement blocks and tile works started. Good opening for bakery and general store. Number of buildings erected about 6; cost about $7,150. Amount expended on permanent improvements $2,205. Jas. H. Wilson, Township Clerk, Carp.

Huntsville, Tn.—Owns and operates waterworks and electric light system; cost $59,727. Good opening for wood-working factories. Number of buildings erected about 9; cost about $6,000. Amount expended on permanent improvements, $32,000. Amount expended on sanitation, $3,000. T. M. Cullon, Town Clerk, Huntsville.

Huron, Tp.—Good openings for apple evaporator, canning factory, and cement tile works. Number of buildings erected 6; cost about $12,000. Amount expended on permanent improvements $3,700. Amount expended on sanitation $66. Angus Martyn, Township Clerk, Ripley.

Ignace, Tp.—No new buildings erected. Amount expended on permanent improvements $371. John Davies, Township Clerk, Ignace.

Ingersoll, Tn.—Owns and operates electric light and power plant. Openings for good industries of any kind. Number of buildings erected about 25; cost about $80,000. Amount expended on permanent improvements about $6,000. W. R. Smith, Town Clerk, Ingersoll.

Innisfil, Tp.—Amount expended on permanent improvements $3,490. R. J. Hill, Township Clerk, Thornton.

Iroquois, V.—Owns and operates waterworks and electric light plant; cost $40,000. Opening for any industry requiring 400 or 500 horse power. No new buildings erected. Amount expended on permanent improvements about $100. Jas. Flanagan, Village Clerk, Iroquois.

Jaffray and Melick, Tps.—Number of buildings erected 12; cost about $4,000. Amount expended on permanent improvements $1,500. C. W. Belyea, Township Clerk, Kenora.

James, Tp.—Four small saw mills and a number of mines started. Good openings for mining, also for a market gardener. Number of buildings erected about 200; cost about $200,000. Amount expended on permanent improvements about $5,000. Amount expended on sanitation about $2,000. H. E. McKee, Township Clerk, Elk Lake.

Jocelyn, Tp.—Good opening for cement works. Number of buildings erected 4; cost $2,000. Amount expended on permanent improvements $200. John C. Canfield, Township Clerk, Carterton.

Johnson, Tarbutt and Tarbutt Additional, Tps.—Good openings for various industries, with direct railway and water facilities and dock. Number of buildings erected 9; cost $2,300. Amount expended on permanent improvements $2,700. W. H. Butterworth, Township Clerk, Desbarats.

Joly, Tp.—Openings for woodworking industries of all kinds, with splendid water power and timber. No new buildings erected. Amount expended on permanent improvements $300. Geo. Harkness, Township Clerk, Sundridge.

Kaladar, Anglesea and Effingham, Tps.—Grist mill and saw mill started. Good opening for planing mill and for cheese box factory, with an abundance of elm. Amount expended on permanent improvements $210. M. Lessard, Township Clerk, Flinton.

Kearney, Tp.—Good openings for woodworking industries, with plenty of timber and good water power. Number of buildings erected 3; cost $2,800. Amount expended on permanent improvements $250. John A. McDonald, Township Clerk, Kearney.

Keewatin, Tn.—Good openings for flour mill, pulp mill, factory for butter tubs, wooden pails, etc., with fine water power available. Number of buildings erected 9; cost about $24,000. Amount expended on permanent improvements $3,000. W. J. Craig, Town Clerk, Keewatin.

Kemptville, V.—Good opening for manufactures, with shipping facilities by rail and water. Number of buildings erected 3; cost about $10,000. Amount expended on permanent improvements about $1,200. S. H. Guest, Village Clerk, Kemptville.

Kennebec, Tp.—Openings for various industries, with good water power. Number of buildings erected about 6; cost about $3,000. Amount expended on permanent improvements about $300. D. A. Osborne, Township Clerk, Arden.

Kenora, Tn.—Tie mill started. Owns and operates hydro-electric power plant; cost $372,533; electric light system, cost $38,624; arc light system, cost $5,954; telephone system, cost $16,840; waterworks, cost $199,824. Good openings for flour mill, pulp and paper mill, barrel factory, match factory and fibre ware. Number of buildings erected 11; cost $30,000. Amount expended on permanent

improvements $9,334. Amount expended on sanitation $7,872. M. McCulloch Town Clerk, Kenora.

KEPPEL, Tp.—Good openings for cement works or woodworking industries Number of buildings erected about 50; cost about $40,000. Amount expended on permanent improvements $3,000. Geo. Atkey, Township Clerk, Wiarton.

KERNS, Tp.—Number of buildings erected 3; cost about $1,500. Amount expended on permanent improvements $2,300. H. M. Ship, Township Clerk, Milberta.

KINCARDINE, Tn.—Owns and operates waterworks; cost $46,799; electric light plant, $20,780. Openings for almost any kind of industry. Number of buildings erected 12; cost $14,400. Amount expended on permanent improvements $2,584 Amount expended on sanitation $112. John H. Scougall, Town Clerk, Kincardine

KINCARDINE, Tp.—Amount expended on permanent improvements $1,950. R B. Campbell, Township Clerk, Armow.

KING, Tp.—Villages of King and Schomberg own and operate lighting plant; cost $1,600. Number of buildings eected 6; cost about $10,000. Amount expended on permanent improvements $6,000. Amount expended on sanitation $500. J. L. Jenkins, Township Clerk, King.

KINGSTON, C.—Grain forwarding companies started and smelter about starting. Owns and operates gas plant, cost $167,318; electric light plant, cost $147,119; waterworks, $300,000. Good openings for smelter, pottery works, cement works, and various small industries. Number of buildings erected 155; cost $452,695. Amount expended on permanent improvements $24,700. Amount expended on sanitation $4,150. W. W. Sands, City Clerk, Kingston.

KINGSTON, Tp.—Whey butter factory started. Good opening for canning factory. Amount expended on permanent improvements $2,000. Amount expended on sanitation $800. Ch. F. Adair, Township Clerk, Cataraqui.

KINGSVILLE, Tn.—Cigar factory started. Owns and operates waterworks; cost $30,000. Good openings for industries requiring tobacco, fruits or vegetables Number of buildings erected 3; cost $4,000. Amount expended on permanent improvements $2,200. Amount expended on sanitation $200. W. A. Smith, Town Clerk, Kingsville.

KINLOSS, Tp.—Amount expended on permanent improvements $1,769. Geo G. Moffat, Township Clerk, Langside.

KITLEY, Tp.—Amount expended on permanent improvements $3,876. J. M Edgar, Township Clerk, Toledo.

KORAH, Tp.—Good opening for chair or box factory, or other industries requiring hard or soft wood. Number of buildings erected 4; cost $2,400. Amount expended on permanent improvements $6,500. K. M. Moore, Township Clerk, Sault Ste. Marie.

LAIRD, Tp.—Good openings for brick and tile yard. Number of buildings erected 2; cost about $2,000. Amount expended on permanent improvements $293. F. H. Schoales, Township Clerk, Laird.

LAKE, Tp.—See Marmora and Lake Tps.

LAKEFIELD, V.—Good openings for hardwood flooring factory and other wood working industries. Number of buildings erected 7; cost $8,500. Amount expended on permanent improvements $1,176. Amount expended on sanitation under $100. W. Sherin, Village Clerk, Lakefield.

LANARK, Tp.—Amount expended on permanent improvements $1,504. Arch. Rankin, Township Clerk, Middleville.

LANARK, V.—Openings for woodworking industries. One new building erected; cost $3,500. Amount expended on permanent improvements $130. Amount expended on sanitation $87. Wm. A. Field, Village Clerk, Lanark.

LANCASTER, Tp.—Number of buildings erected 10; cost $7,500. Amount expended on permanent improvements $2,591. A. J. Macdonald, Township Clerk, North Lancaster.

LANCASTER, V.—Openings for foundry and woodworking industries, with good shipping facilities by land and water. One new building erected; cost $3,000. Amount expended on permanent improvements $1,059. Amount expended on sanitation $500. J. McL. Sutherland, Village Clerk, Lancaster.

LANSDOWNE FRONT, Tp.—See Leeds and Lansdowne Front Tps.

LANSDOWNE REAR, Tp.—See Leeds and Lansdowne Rear Tps.

LATCHFORD, Tn.—Pulp peeling mill started. Owns and operates waterworks; cost $300. Good opening for pulp concentrating mill. Number of buildings erected 5; cost $6,200. Amount expended on permanent improvements $209. S. A. Starling, Town Clerk, Latchford.

LAVALLEE, Tp.—General store started at Devlin. Number of buildings erected about 5; cost $3,385. Amount expended on permanent improvements about $5,000. Arth. Cooke, Township Clerk, Devlin.

LAVANT, Tp.—Openings for mining. Number of buildings erected 2; cost $500. Amount expended on permanent improvements about $107. Wm. Browning, Township Clerk, Lavant Station.

LEAMINGTON, Tn.—Pickle factory started. Owns and operates waterworks; cost $25,000; plant for gas distribution, cost $25,000. Number of buildings erected 12; cost $25,000. Amount expended on permanent improvements about $3,500. Amount expended on sanitation about $80. R. M. Selkirk, Town Clerk, Leamington.

LEEDS AND LANSDOWNE FRONT, Tps.—Granite paving stone quarry and planing mill started. Good opening for brick and tile yard. Number of buildings erected 15; cost $20,000. Amount expended on permanent improvements $7,496. Amount expended on sanitation $15. J. D. W. Darling, Township Clerk, Lansdowne.

LEEDS AND LANSDOWNE REAR, Tps.—Number of buildings erected about 90; cost about $95,000. Amount expended on permanent improvements $3,268. R. J. Green, Township Clerk, Oak Leaf.

LIMERICK, Tp.—One building erected; cost $1,000. Amount expended on permanent improvements $1,217. Jas. W. Ham, Township Clerk, St. Ola.

LINDSAY, Tn.—Owns and operates waterworks; cost $110,000. Good openings for wood and other industries. Number of buildings erected about 24; cost about $55,000. Amount expended on permanent improvements $11,000. Amount expended on sanitation $2,000. F. Knowlson, Town Clerk, Lindsay.

LISTOWEL, Tn.—Owns and operates waterworks, cost $27,500; electric light plant, cost $12,500. No new buildings erected. Wm. Bright, Town Clerk, Listowel.

LITTLE CURRENT, Tn.—Opening for small foundry and a box factory. Number of buildings erected 10; cost about $7,000. Amount expended on permanent

improvements $200. Amount expended on sanitation $100. D. McGilvery, Town Clerk, Little Current.

Lobo, Tp.—New cheese factory started. Good opening for radial railway. Number of buildings erected 8; cost $8,850. Amount expended on permanent improvements about $7,000. Amount expended on sanitation $218. E. R. Barclay, Township Clerk, Poplar Hill.

Lochiel, Tp.—Number of buildings erected 12; cost $9,600. Amount expended on permanent improvements $8,000. V. G. Chisholm, Township Clerk, Lochiel.

Logan, Tp.—Number of buildings erected 3; cost about $8,500. Amount expended on permanent improvements $13,342. Amount expended on sanitation $55. Francis Jacob, Township Clerk, Brodhagen.

London, C.—Several factories have been enlarged. Owns and operates waterworks, cost $934,319; owns London and Port Stanley Railway, cost $1,332,854. Good openings for industries of all kinds. Number of buildings erected 684; cost $850,134. Amount expended on permanent improvements $71,134. Amount expended on sanitation $29,280. S. Baker, City Clerk, London.

London, Tp.—Gasoline engine factory started. Good opening for all kinds of industries, especially woodworking, iron ware factories, and meat packing. Number of buildings erected about 125; cost about $100,000. Amount expended on permanent improvements $11,177. Amount expended on sanitation $104. Miss Mary Grant, Township Clerk, London.

Longueuil, Tp.—Openings for cheese and butter factories. Number of buildings erected 10; cost $7,000. Amount expended on permanent improvements $200. Ed. Carriere, Township Clerk, Ritchouse.

L'Orignal, V.—Good openings for vitrified brick works and for woodworking industries. Number of buildings erected 3 or 4; cost $3,000. Amount expended on sanitation about $500. Colin G. O'Brian, Village Clerk, L'Orignal.

Lorne, Tp.—See Nairn and Lorne Tps.

Lucan, V.—Owns and operates electric light plant; cost $4.300. New industries would be encouraged. Number of buildings erected 7; cost $17,000. Amount expended on permanent improvements about $300. Geo. A. Stanley, Village Clerk, Lucan.

Lucknow, V.—Owns and operates waterworks for fire protection; cost $10.000. Good opening for knitting, clothing or canning factory. Number of buildings erected 2; cost $11,000. Joseph Agnew, Village Clerk, Lucknow.

Luther E., Tp.—Number of buildings erected 10; cost $15,000. Amount expended on permanent improvements $2,000. W. McIntyre, Township Clerk, Grand Valley.

Luther W., Tp.—Number of buildings erected about 10; cost about $10,000. Amount expended on permanent improvements $1,344. Amount expended on sanitation $189. W. W. Duncan, Township Clerk, Conn.

Lutterworth, Tp.—Amount expended on permanent improvements $21. John H. Hulby, Township Clerk. Minden.

Lynedoch, Tp.—See Brudenell and Lynedoch Tps.

McClure, Tp.—See Bangor, McClure and Wicklow Tps.

McDougall, Tp.—Good opening for woodworking industries, with plenty of hardwood timber and splendid water power. Number of buildings erected 6; cost

$4,200. Amount expended on permanent improvement $524. W. J. Jones, Township Clerk, Parry Sound.

McGillivray, Tp.—Number of buildings erected about 9; cost about $9,000. Amount expended on permanent improvements $2,133. J. D. Drummond, Township Clerk, Ailsa Craig.

McIrvine, Tp.—Good openings for saw mill, planing mill, sash and door factory, woodenware factory, pulp and paper mills, brick and tile yard, and implement factory. Amount expended on permanent improvements $2,776. Frank J. Strain, Township Clerk, Fort Frances.

McKellar, Tp.—Good opening for woollen mill. Number of buildings erected about 5; cost about $1,500. Amount expended on permanent improvements $321. John Fletcher, Township Clerk, McKellar.

McKillop, Tp.—Number of buildings erecetd 3; cost $4,400. Amount expended on permanent improvements, $3,982. M. Murdie, Township Clerk, Winthrop

McKim, Tp.—Good openings for brickyard and grist mill. One building erected; cost $1,200. Amount expended on permanent improvements $537. S. Fournier, Township Clerk, Sudbury.

McLean and Rideout, Tps.—Good opening for wood-working industries. Number of buildings erected 2; cost $1,000. Amount expended on permanent improvements $500. W. H. Brown, Township Clerk, Baysville.

McMurrich, Tp.—Good openings for veneering and hub factories. Number of buildings erected 3; cost $1,700. Amount expended on permanent improvements $700. D. C. McFarlane, Township Clerk, Sprucedale.

McNab, Tp.—Number of buildings erected 2; cost $1,000. Amount expended on permanent improvements $10,000. John McGregor, Township Clerk, Renfrew.

Macaulay, Tp.—Electric power plant started. Good openings for industries, with splendid water power. Amount expended on permanent improvements about $200 by Government. Alex. Barron, Township Clerk, Bracebridge.

Macdonald, Meredith, Etc., Tps.—Good opening for sawmill or wood factory. Amount expended on permanent improvements $1,647. R. J. Thomas, Township Clerk, Echo Bay.

Machar, Tp.—Good opening for small sawmill and wood-working establishment. H. O. Boone, Township Clerk, South River.

Machin, Tp.—Opening for flour mill and grist mill, with good water power. One building erected; cost $2,000. Amount expended on permanent improvements $1,500. Geo. Ructe, Township Clerk, Eagle River.

Madoc, Tp.—Number of buildings erected about 12; cost about $12,500. Amount expended on permanent improvements $4,000. Amount expended on sanitation $450. W. F. Allen, Township Clerk, Cooper.

Madoc, V.—Electric power and light plant started. Owns and operates electric light plant; cost about $15,000. Good openings for canning factory, condensed milk factory, pork packing, foundry, and talc industries. Number of buildings erected 2; cost $14,000. Amount expended on permanent improvements about $760. W. J. Hill, Village Clerk, Madoc.

Maidstone, Tp.—Number of buildings erected about 47; cost about $47,000. Amount expended on permanent improvements $7,202, including statute labour, $2,500 Amount expended on sanitation $129. M. M. Hugh, Township Clerk, Woodslee.

MALAHIDE, Tp.—Good opening for evaporator. Number of buildings about 6; cost $1,000. Amount expended on permanent improvements $5,000. M. E. Lyon, Township Clerk, Aylmer.

MALDEN, Tp.—Brick and tile yard started. Good opening for glass factory, with suitable sand available. Number of buildings erected 13; cost $9,450. Amount expended on permanent improvements $3,226. Jas. Honor, Township Clerk, Amherstburg.

MANVERS, Tp.—Number of buildings erected 6; cost $5,800. Amount expended on permanent improvements $2,727. J. J. Preston, Township Clerk, Manvers.

MARA, Tp.—Number of buildings erected 4; cost about $1,500. Amount expended on permanent improvements $5,000. W. R. McPhee, Township Clerk, Brechin.

MARIA, Tp.—See Head, Maria and Clara Tps.

MARIPOSA, Tp.—Good openings for shoemaker and tailor. Number of buildings erected about 6; cost about $6,000. Amount expended on permanent improvements $7,510 besides 5,000 days statute labour. Amount expended on sanitation $191 for Board of Health. J. B. Weldon, Township Clerk, Oakwood.

MARKDALE, V.—Owns and operates waterworks; cost $30,000. Openings for any kind of manufacturing. No new buildings erected. R. D. Gilfillan, Village Clerk, Markdale.

MARKHAM, Tp.—Amount expended on permanent improvements $6,000. Amount expended on sanitation $350. C. H. Stiver, Township Clerk, Unionville.

MARKHAM, V.—Owns and operates waterworks and electric light plant; cost $13,000. Good opening for foundry and machine shop. Number of buildings erected 7; cost $22,000. Amount expended on permanent improvements $500. M. White, Village Clerk, Markham.

MARLBOROUGH, Tp.—Amount expended on permanent improvements $215. Ed. Mills, Township Clerk, Malakoff.

MARMORA, V.—Good opening for stave mill, box factory or other wood-working industry, with good power available. Number of buildings erected 3 or 4; cost about $12,000. Amount expended on permanent improvements, about $400. H. W. Sabine, Village Clerk, Marmora.

MARMORA AND LAKE, Tps.—Good opening for mining. Number of buildings erected 11; cost about $40,000. Amount expended on permanent improvements $478. Thos Laycock, Township Clerk, Deloro.

MARTLAND, Tp.—Good opening for cheese factory. Number of buildings erected 8; cost about $1,200. Amount expended on permanent improvements $2,600. Amount expended on sanitation $35. Jos. Guerin, Township Clerk, Monetteville.

MARYBOROUGH, Tp.—Openings for almost any industry, with good shipping facilities. Number of buildings erected 2; cost $2,400. Amount expended on permanent improvements $2,756. W. W. Scott, Township Clerk, Moorefield.

MARYSBURGH N., Tp.—Good opening for canning factory. Number of buildings erected 5; cost $8,000. Amount expended on permanent improvements $900. Levi Williams, Township Clerk, Picton.

MARYSBURGH S., Tp.—Number of buildings erected 20; cost $10,000. Amount expended on permanent improvements $1,500. Harvey F. Grimmon, Township Clerk, Port Milford.

Massey, Tn.—Owns and operates waterworks; cost about $19,000. Good opening for pulp mill. Number of buildings erected 11; cost about $8,400. Amount expended on permanent improvements $446. D. W. Cautlon, Town Clerk, Massey.

Matawachan, Tp.—See Griffith and Matawatchan Tps.

Matchedash, Tp.—Good opening for blacksmith and repair shop. Number of buildings erected 3; cost $1,200. Amount expended on permanent improvements $200. E. W. Kitchen, Township Clerk, Lovering.

Matilda, Tp.—Number of buildings erected 4; cost $6,000. Amount expended on permanent improvements $2,813. J. J. Payne, Township Clerk, Brinston.

Mattawa, Tn.—Good openings for almost any kind of industry, with abundant water power at hand. No new buildings erected. Amount expended on permanent improvements $456. John McMeekin, Town Clerk, Mattawa.

Mattawan, Tp.—Good opening for pulp mill and wood-working industries. No new buildings erected. Amount expended on permanent improvements $18. A. Borrowman, Township Clerk, Mattawa.

Maxville, V.—Good opening for stave factory. Number of buildings erected 4; cost $7,800. Amount expended on sanitation $100. D. P. McDiarmid, Village Clerk, Maxville.

May, Tp.—See Salter, Etc., Tps.

Mayo, Tp.—Openings for mining. No new buildings erected. Amount expended on permanent improvements $300. R. Ramsbottom, Township Clerk, Rowland.

Medonte, Tp.—Good openings for concrete pipe works, saw and shingle mill, cheese and butter factory and fruit evaporator. Number of buildings erected 35; cost about $20,000. Amount expended on permanent improvements $5,000. T. D. Robinson, Township Clerk, Moonstone.

Medora and Wood Tp.—Good opening for wood-working industries. Number of buildings erected 4; cost $40,000. Amount expended on permanent improvements $3,218. Amount expended on sanitation $46. H. C. Guy, Township Clerk, Dudley.

Melancthon, Tp.—Number of buildings erected 10; cost about $10,000. Amount expended on permanent improvements $1,905. Amount expended on sanitation $21. Jas. Brown, Township Clerk, Melancthon.

Melick, Tp.—See Jaffray and Melick Tps.

Meredith, Tp.—See Macdonald, etc., Tps.

Merrickville, V.—Openings for almost any kind of manufacturing, with good power and shipping facilities by land and water. Number of buildings erected 6; cost $7,800. Amount expended on permanent improvements $2,508. D. J. Hall, Village Clerk, Merrickville.

Merritton, V.—Paper mills under construction. Owns and operates waterworks; cost $86,180; electric light plant cost $10,908. No new buildings erected. Good opening for factories, with building and power available. Amount expended on permanent improvements $1,065. Amount expended on sanitation $688. R. Clark, Village Clerk, Merritton.

Mersea, Tp.—Number of buildings erected 16; cost $15,000. Amount expended on permanent improvements $12,176. Alf. Hairsine, Township Clerk, Leamington.

METCALFE, Tp.—Number of buildings erected 3; cost about $3,800. Amount expended on permanent improvements $4,750. Amount expended on sanitation $45. Rich. Ward, Township Clerk, Strathroy.

METHUEN, Tp.—See Belmont and Methuen Tps.

MIDDLETON, Tp.—Amount expended on permanent improvements $3,056. D. W. White, Township Clerk, Courtland.

MIDLAND, Tn.—Owns and operates waterworks; cost $87,500; and electric light plant; cost $47,700. Good opening for flour mill, ship building and stove factory. Number of buildings erected 70; cost $85,000. Amount expended on permanent improvements $10,000. Amount expended on sanitation $500. Frank R. Weston, Town Clerk, Midland.

MILLBROOK, V.—Opening for any class of manufacturing. No new buildings erected. Amount expended on permanent improvements $537. Amount expended on sanitation $48. Walt. W. Gillott, Village Clerk, Millbrook.

MILLER, Tp.—See Clarendon and Miller Tps.

MILTON, Tn.—Owns and operates waterworks, cost $25,000; electric light plant, $15,000. Good opening for farm implement factory. Number of buildings erected 13; cost $26,000. Amount expended on permanent improvements about $1,000. Amount expended on sanitation about $500. E. A. Hemstreet, Town Clerk, Milton.

MILVERTON, V.—Good openings for woollen mill, sash and door factory, and foundry and repair shop. Number of buildings erected 6; cost about $23,000. Amount expended on permanent improvements $4,000. W. D. Weir, Village Clerk, Milverton.

MINDEN, Tp.—Good opening for furniture factory, with abundance of hardwood and fine water power. No new buildings erected. Amount expended on permanent improvements $716, including $500 Government grant. S. F. Stinson, Township Clerk, Minden.

MINTO Tp.—Number of buildings erected 9; cost $11,900. Amount expended on permanent improvements $706. W. D. McLellan, Township Clerk, Harriston.

MITCHELL, Tn.—Owns and operates waterworks and electric light plant; value $29,000. Amount expended on permanent improvements, $1,700. A. D. Cameron, Town Clerk, Mitchell.

MONAGHAN N., Tp.—Good openings for creamery, canning factory or woodenware industries. Number of buildings erected about 8; cost about $8,000. Amount expended on permanent improvements $1,200. G. W. Bennett, Township Clerk, Peterborough.

MONAGHAN S., Tp.—Good opening for butter factory. No new buildings erected. Amount expended on permanent improvements $3,000. J. A. Porter, Township Clerk, South Monaghan.

MONCK, Tp.—No new buildings erected. Amount expended on permanent improvements $1,908. H. F. Bickmore, Township Clerk, Alport.

MONMOUTH, Tp.—Good opening for furniture factory. Number of buildings erected 6; cost about $3,000. Amount expended on permanent improvements $103. Amount expended on sanitation $23. Alex. Riley, Township Clerk, Wilberforce.

MONO, Tp.—Owns cement tile plant for culverts, and sells surplus to other municipalities. Good openings for cheese and butter factories, and brick and tile

yard. Number of buildings erected 6 or 7; cost $9,000 or $10,000. Amount expended on permanent improvements $5,071. Geo. H. Harshaw, Township Clerk, Camilla.

MONTEAGLE AND HERSCHELL, Tps.—Good opening for working up wood for pulp, furniture and farm implements. Amount expended on permanent improvements $600. G. A. Jordison, Township Clerk, Maynooth.

MOORE, Tp.—Good opening for tile yard. Number of buildings erected about 25; cost about $12,500. Amount expended on permanent improvements $7,500. Chas. C. Watson, Township Clerk, Brigden.

MORLEY, Tp.—Portable sawmill and clothes reel factory started. Opening for general store. Number of buildings erected 8; cost about $5,000. Amount expended on permanent improvements $5,000. Guy G. Gamsby, Township Clerk, Stratton Station.

MORNINGTON, Tp.—New cheese factory started. Number of buildings erected 12; cost $13,500. Amount expended on permanent improvements $4,000. Wm. Waddell, Township Clerk, Burns.

MORRIS, Tp.—Good opening for sugar factory. Number of buildings erected 5; cost $10,000. Amount expended on permanent improvements $5,817. Alex. MacEwen, Township Clerk, Bluevale.

MORRISBURG, V.—Tack factory started. Owns and operates waterworks; cost about $30,000; electric light plant; cost about $30,000. One building erected; cost about $6,000. Amount expended on permanent improvements $3,750. F. R. Chalmers, Village Clerk, Morrisburg.

MOSA, Tp.—Two brick and tile yards and portable sawmill started. Number of buildings erected 7; cost $3,000. Amount expended on permanent improvements $3,500. Amount expended on sanitation $20. John S. Walker, Township Clerk, Glencoe.

MOULTON, Tp.—Number of buildings erected about 5; cost about $2,000. Amount expended on permanent improvements $283. W. M. Allen, Township Clerk, Moulton.

MOUNT FOREST, Tn.—Owns and operates waterworks and electric light plant; cost about $45,000. One new building erected; cost about $2,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation about $300. W. C. Perry, Town Clerk, Mount Forest.

MURRAY, Tp.—Number of buildings erected about 5; cost about $2,500. Amount expended on permanent improvements $1,971. Amount expended on sanitation $572. Wm. Little, Township Clerk, Wooler.

MUSKOKA, Tp.—Number of buildings erected 3; cost about $6,400. Amount expended on permanent improvements $665. Jas. Brydon, Township Clerk, Gravenhurst.

NAIRN AND LORNE, Tps.—Good openings for industries with available water power and factory sites. Number of buildings erected 3; cost $3,000. Amount expended on permanent improvements $400. W. Humphries, Township Clerk, Nairn Centre.

NAPANEE, Tn.—Owns and operates electric light plant; cost $45,000. Good opening for furniture factory and canning factory. One building erected; cost $700. Amount expended on permanent improvements about $4,000. W. A. Grange, Town Clerk, Napanee.

NASSAGAWEYA, Tp.—Good opening for brick yard. Number of buildings erected about 12; cost about $15,000. Amount expended on permanent improvements about $3,500. M. Beath, Township Clerk, Campbellville.

NEEBING, Tp.—Good opening for various industries, with 5 miles of water frontage. Number of buildings erected about 10; cost about $2,600. Amount expended on permanent improvements $10,234. W. McRae, Township Clerk, Fort William.

NEELON AND GARSON, Tps.—Some uncompleted buildings being erected. Amount expended on permanent improvements about $1,800. W. Powell, Township Clerk, Sudbury.

NELSON, Tp.—Number of buildings erected 10; cost $1,800. Amount expended on permanent improvements $3,500. J. F. Richardson, Township Clerk, Milton.

NEPEAN, Tp.—Good openings for various industries, with cheap electric and water power and good transportation. Number of buildings erected about 100; cost about $100,000. Amount expended on permanent improvements $8,118. A. G. Dawson, Township Clerk, Westboro.

NEPIGON, Tp.—Good openings for furniture factory and other woodworking industries, with abundant material, unlimited water power, and shipping facilities by land and water; also for mining and quarrying. Number of buildings erected 14; cost $30,000. Amount expended on permanent improvements $500. Amount expended on sanitation $1,000. C. A. Lynch, Township Clerk, Nepigon.

NEUSTADT, V.—Number of buildings erected about 4; cost about $5,000. Amount expended on permanent improvements $1,481. R. W. Walden, Village Clerk, Neustadt.

NEW HAMBURG, V.—Apple evaporator, collar factory, and machine repair shop started. Good openings for paper box factory, glove factory, felt hat factory, and chair factory. Number of buildings erected 6; cost $18,000. Amount expended on permanent improvements $2,000. Wm. Millar, Village Clerk, New Hamburg.

NEW LISKEARD, Tn.—Owns and operates waterworks; cost $60,000. Good opening for grist mill and wooden ware factory. Number of buildings erected 5; cost about $20,000. Amount expended on permanent improvements $7,500. Amount expended on sanitation about $8,000. H. Hartman, Town Clerk, New Liskeard.

NEWBORO, V.—Number of buildings erected about 6; cost about $3,000. Amount expended on permanent improvements $150. L. S. Lewis, Village Clerk, Newboro.

NEWBURGH, V.—Good opening for carriage factory, with buildings and water power available. Number of buildings erected 2; cost about $800. Amount expended on permanent improvements $1,154. Ch. Welbanks, Village Clerk, Newburgh.

NEWBURY, V.—Good opening for gristing business. No new building erected. Charles Tucker, Village Clerk, Newbury.

NEWCASTLE, V.—Good opening for canning factory. Number of buildings erected 2; cost $6,000. Amount expended on permanent improvements $500. Geo. Jamieson, Village Clerk, Newcastle.

NEWMARKET, Tn.—Owns and operates waterworks, cost $29,000; electric light plant cost $22,000. Good opening for sash and door factory and planing mill. Number of buildings erected about 30; cost about $40,000. Amount expended on

permanent improvements $14,000. Amount expended on sanitation $137. J. E. Hughes, Town Clerk, Newmarket.

NIAGARA, Tn.—Owns and operates waterworks, cost $36,000; electric light plant, cost $23,000. Good opening for various industries requiring power. Number of buildings erected 3; cost $10,000. Amount expended on permanent improvements $1,400. Amount expended on sanitation $100. W. E. Lyall, Town Clerk, Niagara-on-the-Lake.

NIAGARA, Tp.—Number of buildings erected 4; cost $13,800. Amount expended on permanent improvements $4,378. John Knox, Township Clerk, Virgil.

NIAGARA FALLS, C.—Corrugated paper factory started. Owns and operates waterworks, cost $200,000; electric light plant, cost $125,000. Good opening for any industry requiring electric power. Number of buildings erected 40; cost $280,000. Amount expended on permanent improvements $11,000. Amount expended on sanitation $12,000. W. J. Seymour, City Clerk, Niagara Falls.

NICHOLL, Tp.—Good opening for apple evaporator. No new buildings erected. Amount expended on permanent improvements $1,000. John R. Wissler, Township Clerk, Salem.

NIPISSING, Tp.—Electric power plant and steam saw mill started. Good opening for general store. Building for power plant erected; cost about $200,000. Amount expended on permanent improvements $300. W. S. Rowson, Township Clerk, Nipissing.

NISSOURI E., Tp.—Number of buildings erected about 27; cost about $12,000. Amount expended on permanent improvements $4,190. Amount expended on sanitation $175. G. B. Anderson, Township Clerk, Kintore.

NISSOURI W., Tp.—Number of buildings erected about 12; cost about $6,500. Amount expended on permanent improvements $6,350. J. H. David, Township Clerk, St. Marys.

NORMANBY, Tp.—Saw mill and planing mill started. R. H. Fortune, Township Clerk, Ayton.

NORTH BAY, Tn.—Owns and operates waterworks; cost $109,925. Good opening for woodworking industries, with plentiful raw material, abundant power, and good shipping facilities. Number of buildings erected about 100; cost about $200,000. Amount expended on permanent improvements $24,748. Amount expended on sanitation $4,823. M. W. Flannery, Town Clerk, North Bay.

NORWICH, V.—Good opening for flour and grist mill. Number of buildings erected 2; cost about $3,000. Amount expended on permanent improvements $1,200. Wm. Fairley, Village Clerk, Norwich.

NORWICH N., Tp.—Good opening for grist mill. Number of buildings erected 12; cost $30,000. Amount expended on permanent improvements $4,883. Amount expended on sanitation $281. Ch. E. Burgess, Township Clerk, Burgessville.

NORWICH S., Tp.—Openings for any kind of manufacturing. Number of buildings erected 6; cost $6,000. Amount expended on permanent improvements $6,600. H. McFarlane, Township Clerk, Otterville.

NORWOOD, V.—Openings for furniture factory and canning factory. Number of buildings erected 4; cost about $7,600. Amount expended on permanent improvements $65. James Calder, Village Clerk, Norwood.

NOTTAWASAGA, Tp.—One building erected; value $800. Amount expended on permanent improvements $4,804. Amount expended on sanitation $77. L. McAlister, Township Clerk, Duntroon.

OAKLAND, Tp.—Apple drying factory and cold storage plant started. Number of buildings erected 6; cost $8,500. Amount expended on permanent improvements $765. Percy M. Button, Township Clerk, Oakland.

OAKLEY, Tp.—Good openings for saw mill, lath mill, or small wooden ware factory. Number of buildings erected 2; cost $23,000. Amount expended on permanent improvements $1,070. H. J. Johnston, Township Clerk, Vankoughnet.

OAKVILLE, Tn.—Owns and operates waterworks, cost $45,000; electric light plant, cost $25,000. Good openings for industries of any character. Number of buildings erected 14; cost $28,000. Amount expended on permanent improvements $6,310. Amount expended on sanitation $162. Chas. A. Bradbury, Town Clerk, Oakville.

O'CONNOR, Tp.—Good opening for creamery. Number of buildings erected about 18; cost about $6,000. Amount expended on permanent improvements $1,400. H. J. Winslow, Township Clerk, O'Connor.

OIL SPRINGS, V.—Good openings for cheese and butter factories, planing mill, or basket and excelsior factory. Amount expended on permanent improvements $502. D. P. Sisk, Village Clerk, Oil Springs.

OLDEN, Tp.—Boot last factory started. Good opening for factory for wooden parts of waggons, sleighs and other vehicles, or of grain separators and other machines. Number of buildings erected 4; cost about $2,000. Amount expended on permanent improvements about $1,600. Amount expended on sanitation $100. W. P. Bender, Township Clerk, Long Lake.

OLIVER, Tp.—Good opening for furniture factory with abundance of suitable birchwood. One building erected; cost $6,000. Amount expended on permanent improvements $3,659. Amount expended on sanitation $30. Ch. R. B. Hill, Township Clerk, Murillo.

OMEMEE, V.—Good openings for industries using hardwood. One new building erected; cost $1,000. Amount expended on permanent improvements $715. Geo. A. Balfour, Village Clerk, Omemee.

ONEIDA, Tp.—Mining, crushing and grinding gypsum started. Openings for stone quarries, gypsum and natural gas. No new buildings erected. Amount expended on permanent improvements about $1,500. Amount expended on sanitation $17. John Senn, Township Clerk, York.

ONONDAGA, Tp.—Number of buildings erected about 6; cost about $3,000. Amount expended on permanent improvements $2,235. S. J. McKelvey, Township Clerk, Tuscarora.

OPS, Tp.—Good opening for industries on Trent Canal waters and two railways. Number of buildings erected 10; cost $16,000. Amount expended on permanent improvements $4,234. Amount expended on sanitation $53. W. E. Agnew, Township Clerk, Lindsay.

ORANGEVILLE, Tn.—Owns and operates waterworks; cost $55,000. Openings for manufactures of all kinds. No new buildings erected. A. A. Hughson, Town Clerk, Orangeville.

ORFORD, Tp.—Openings for light woodware factories and cheese and butter factories. Number of buildings erected 9; cost about $9,500. Amount expended on permanent improvements $7,840. Amount expended on sanitation $33. F. Littlejohns, Township Clerk, Highgate.

ORILLIA, Tn.—Motor factory, and refining and smelting works started. Owns and operates waterworks; cost between $110,000 and $120,000; electric light sys-

tem and power plant, cost about $325,000. Good openings for shoe factories, woodenware factories, clothing factory, or any line outside steel industries. Number of buildings erected about 100, including schools, factories, public library and block of stores; cost about $200,000. Amount expended on permanent improvements about $5,000. Amount expended on sanitation about $50,000. C. E. Grant, Town Clerk, Orillia.

Orillia, Tp.—Good opening along railways for industries requiring extensive areas. Number of buildings erected about 10; cost about $10,000. Amount expended on permanent improvements $4,538. J. C. Rose, Township Clerk, Orillia.

Oro, Tp.—Roller flour mill started. Number of buildings erected 12; cost $25,000. Amount expended on permanent improvements $1,102. H. J. Tudhope, Township Clerk, Rugby.

Osgoode, Tp.—Good opening for canning factory. Number of buildings erected about 15; cost about $38,000. Amount expended on permanent improvements $3,000. F. Iveson, Township Clerk, Metcalfe.

Oshawa, Tn.—An automobile factory and interior fittings factory started. Owns and operates waterworks; cost $130,000. Number of buildings erected about 48; cost about $120,000. Amount expended on permanent improvements $11,500. Amount expended on sanitation $2,500. Thos. Morris, Town Clerk, Oshawa.

Osnabruck, Tp.—Good opening for concrete works or canning factory. Number of buidings erected 18; cost about $2,500. Amount expended on permanent improvements $5,700. Amount expended on sanitation $65. H. E. Hodgins, Township Clerk, Osnabruck Centre.

Oso, Tp.—Number of buildings erected 4; cost about $4,000. Amount expended on permanent improvements about $400. John Hetherington, Township Clerk, Sharbot Lake.

Osprey, Tp.—Veneer mill and stave and heading mill started. Good openings for brick yard and butter factory. Number of buildings erected about 45; cost about $40,000. Amount expended on permanent improvements $2,932. Thos. Scott, Township Clerk, McIntyre.

Otonabee, Tp.—Number of buildings erected 4; cost $8,000. Amount expended on permanent improvements $4,067. Amount expended on sanitation $20. J. M. Drummond, Township Clerk, Keene.

Ottawa, C.—Owns and operates waterworks; cost $2,250,000; electric light plant, cost $330,000. Openings for almost any kind of industry. Number of buildings erected 683; cost $4,527,590. Amount expended on permanent improvements $345,749. Amount expended on sanitation $107,900. John Henderson, City Clerk, Ottawa.

Owen Sound, Tn.—Excelsior factory started, and large furniture factory in construction. Owns and operates waterworks; value $225,900; electric light and power $114,959, and gas light and fuel $89,472. Good openings for factories using wood, and industries requiring limestone; good means of transportation. Number of buildings erected 74; cost about $300,000. Amount expended on permanent improvements $17,128. Amount expended on sanitation $4,549. Chas. Gordon, Town Clerk, Owen Sound.

Oxford, Tp.—Number of buildings erected about 5; cost about $5,000. Amount expended on permanent improvements $1,500. Ch. H. Anderson, Township Clerk, Oxford Mills.

Oxford E., Tp.—Number of buildings erected 7; cost $7,000. Amount expended on permanent improvements $5,058. Amount expended on sanitation $47. F. G. Jackson, Township Clerk, Oxford Centre.

Oxford N., Tp.—Number of buildings erected about 4; cost about $2,000. Amount expended on permanent improvements about $2,500. Rich. Seldon, Township Clerk, Ingersoll.

Oxford W., Tp.—Good opening for cement tile works. Number of buildings erected about 12; cost about $6,600. Amount expended on permanent improvements $2,650, besides about 2,000 days statute labour. B. G. Jermey, Township Clerk, Ingersoll.

Paipoonge, Tp.—Local telephone system started. Good opening for brick yard. Number of buildings erected 6; cost $3,000. Amount expended on permanent improvements $4,300. A. E. Babcock, Township Clerk, Slate River Valley.

Paisley, V.—Owns and operates waterworks for fire protection and street sprinkling; value $9,900. Good opening for carpet factory, knitting factory or other industry with buildings, etc., available. No new buildings erected. Amount expended on permanent improvements $2,108. Amount expended on sanitation $307. J. C. Gibson, Village Clerk, Paisley.

Pakenham, Tp.—Good openings for almost any kind of industry. Number of buildings erected 4; cost about $9,000. Amount expended on permanent improvements about $1,400. Jas. Connery, Township Clerk, Cedar Hill.

Palmerston, Tn.—Owns and operates waterworks, cost $40,000; electric light plant, cost $14,000. Good openings for furniture factory, woodenware factory, and dairy supplies or machinery. Number of buildings erected 10; cost $12,000. Amount expended on permanent improvements $2,000. Amount expended on sanitation $5,500 for sewers. H. Hyndman, Town Clerk, Palmerston.

Palmerston, N. and S. Canonto, Tps.—One building erected; cost $400. Amount expended on permanent improvements $400. Jas. Geddes, Township Clerk, McLaren's Depot.

Papineau, Tp.—No new buildings erected. Amount expended on permanent improvements $63 by township, $1,500 by Government. A. Borrowman, Township Clerk, Mattawa.

Paris, Tn.—Owns and operates waterworks, cost $82,000; electric light plant, cost $54,000. Openings for various industries. Number of buildings erected 13; cost $75,000. Amount expended on permanent improvements $2,700. Amount expended on sanitation $400. Thos. McCosh, Town Clerk, Paris.

Parke, Tp.—See Korah and Parke Tps.

Parkhill, Tn.—Number of buildings erected 3; cost $19,000 including post-office. Amount expended on permanent improvements $474. Amount expended on sanitation $188. John H. Laughton, Town Clerk, Parkhill.

Parry Sound, Tn.—Chemical factory under construction. Owns and operates waterworks, cost $60,000; electric light plant, cost $75,000. Good openings for flour and woollen mills, tannery, smelter, woodenware and other factories, with excellent power and shipping facilities by land and water. Number of buildings erected about 40; cost about $55,000. Amount expended on permanent improvements about $3,500. Amount expended on sanitation about $2,100. E. E. Armstrong, Town Clerk, Parry Sound.

Peel, Tp.—Number of buildings erected 19; cost about $17,700. Amount expended on permanent improvements $5,150. Edw. Gamer, Township Clerk, Arthur.

PELEE, Tp.—Good openings for tobacco drying factory, canning factory, cement works, brick and tile yards and quarries. Number of buildings erected 10; cost $10,000. Amount expended on permanent improvements $750. Wm. Stewart, Township Clerk, Pelee Island.

PELHAM, Tp.—Good opening for canning factory. Number of buildings erected about 6; cost about $12,000. Amount expended on permanent improvements $4,000. A. N. Armbrust, Township Clerk, Ridgeville.

PEMBROKE, Tn.—Foundry and woollen mill started. Owns and operates waterworks; value $95,000. Good openings for boot and shoe factory, woodenware factories or any industries employing young men and women. Number of buildings erected 18; cost $160,000. Amount expended on permanent improvements $16,000. Amount expended on sanitation $650. A. J. Fortier, Town Clerk, Pembroke.

PEMBROKE, Tp.—Steam saw mill started. Good openings for brick and tile yard and for woodenware industries; two railways and long frontage on Ottawa River. Number of buildings erected 3; cost about $2,600. Amount expended on permanent improvements $260. H. W. Perrett, Township Clerk, Pembroke.

PENETANGUISHENE, Tn.—Owns and operates waterworks; cost $49,000. Good openings for woodworking factories, foundries and ironworking factories, knitting. and woollen mills. Number of buildings erected 12; cost $15,000. Amount expended on permanent improvements $3,320. Amount expended on sanitation $2,328. W. H. Hewson, Town Clerk, Penetanguishene.

PERCY, Tp.—Number of buildings erected about 6; cost about $10,000. Amount expended on permanent improvements about $1,500. P. S. Ewing, Township Clerk, Warkworth.

PERRY, Tp.—Good openings for saw mill and planing factory. Number of buildings erected 2; cost $2,000. Amount expended on permanent improvements $450. F. W. Brooks, Township Clerk, Emsdale.

PERTH, Tn.—Owns and operates electric light plant; cost $13,000. Good openings for various industries. Number of buildings erected about 10; cost about $10,000. Amount expended on permanent improvements $3,000. J. A. Kerr, Town Clerk, Perth.

PETAWAWA, Tp.—Good openings for cheese factories. Number of buildings erected 4; cost $3,000, besides erections by Militia Department. Amount expended on permanent improvements $150, beside expenditure by Militia Department. Amount expended on sanitation $25. Fred Kozzatz, Township Clerk, Pembroke.

PETERBOROUGH, C.—Owns and operates waterworks; cost $458,000. Good opening for industries of all kinds with cheap hydro-electric power and excellent shipping facilities. Number of buildings erected 228; cost $343,489. Amount expended on permanent improvements $16,230. Amount expended on sanitation $6,321. S. R. Armstrong, City Clerk, Peterborough.

PETROLEA, Tn.—Owns and operates waterworks; cost $190,430. Good openings for packing house and other industries with good sites, water and transportation. No new buildings erected. Amount expended on permanent improvements $23,500. John McHattie, Town Clerk, Petrolea.

PICKERING, Tp.—Number of buildings erected 15; cost $20,000. Amount expended on permanent improvements $6,380. Amount expended on sanitation $603. Donald R. Beaton, Township Clerk, Whitevale.

PICTON, Tn.—Owns and operates waterworks and electric light plant; value $60,350. Openings for industries of almost any kind. Number of buildings

erected 2; cost about $4,000. Amount expended on permanent improvements $5,272. Amount expended on sanitation, $352. R. H. Hubbs, Town Clerk, Picton.

Pilkington, Tp.—Number of buildings erected 3; cost $5,500. Amount expended on permanent improvements $2,356. G. F. Cromar, Township Clerk, Salem.

Pittsburg, Tp.—Number of buildings erected 8; cost $9,000. Amount expended on permanent improvements $3,876. Wm. Murray, Township Clerk, Barriefield.

Plantagenet, N., Tp.—Good opening for brick yard and lime work. Number of buildings erected about 20; cost about $20,000. Amount expended on permanent improvements $500. D. M. Viau, Township Clerk, Plantagenet.

Plummer, Additional, Tp.—New sawmill started. Good openings for sawmill, hardwood industries, woollen mills, planing mills, smelters, etc. Number of buildings erected about 6; cost about $2,000. Amount expended on permanent improvements, $600. N. H. Peterson, Township Clerk, Bruce Mines.

Plympton, Tp.—Cheese and butter factory started. Good opening for milk condensing factory, brick and tile yard, concrete tile works, fruit evaporator and canning factory. Number of buildings erected 7; cost $9,500. Amount expended on permanent improvements $6,302. J. K. Cairns, Township Clerk, Camlachie.

Point Edward, V.—Good openings for various industries, and aid would be given. Number of buildings erected 4; cost about $4,000. J. F. O'Neil, Village Clerk, Point Edward.

Port Arthur, C.—Drydock and shipbuilding works started. Owns and operates waterworks, cost $400,000; electric light plant, cost $71,000; telephone system, cost $101,500; power plant, cost $294,000. Good openings for flour mill, match factory, woodware industry, rolling mill and woollen mill. Number of buildings erected 173; cost about $744,810. Amount expended on permanent improvements $52,615. Amount expended on sanitation $29,800. Jas. McTeigue, City Clerk, Port Arthur.

Port Carling, V.—Number of buildings erected 2; cost $1,000. Amount expended on permanent improvements $612. Amount expended on sanitation $40. F. D. Stubbs, Village Clerk, Port Carling.

Port Colborne, V.—Owns and operates waterworks; cost $30,000. Good openings for cement works, boat building and other industries. Number of buildings erected 5; cost $10,000. Amount expended on permanent improvements $2,000. Frank D. Noble, Village Clerk, Port Colborne.

Port Dalhousie, V.—Good openings for most industries. Number of buildings erected 5; cost about $6,000. Amount expended on permanent improvements $1,220. J. M. A. Waugh, Village Clerk, Port Dalhousie.

Port Dover, V.—Good opening for various industries with abundance of natural gas, and excellent shipping facilities by land and water. Number of buildings erected 6; cost $7,000. Amount expended on permanent improvements $2,984. James Sloane, Village Clerk, Port Dover.

Port Elgin, V.—Owns and operates waterworks; cost about $40,000. Good opening for canning factory. Number of buildings erected 5; cost $15,000. D. Geddes, Village Clerk, Port Elgin.

Port Hope, Tn.—Owns and operates waterworks; cost $115,000. Good opening for iron and brass industries. Number of buildings erected 6; cost $10,000.

Amount expended on permanent improvements $10,300. J. W. Sanders, Town Clerk, Port Hope.

Port Perry, V.—Owns and operates waterworks and electric light plant; cost $23,000. Good opening for canning factory. One building erected; cost about $2,500. Amount expended on permanent improvements $2,500. W. H. Harris, Village Clerk, Port Perry.

Port Rowan, V.—Brick factory started. Owns and operates gas street lighting plant; cost $424. Good opening for canning factory. Number of buildings erected 4; cost about $3,000. Amount expended on permanent improvements $459. Jas. Ryan, Village Clerk, Port Rowan.

Port Stanley, V.—Openings for any kind of industries. Number of buildings erected 15; cost about $11,000. Amount expended on permanent improvements $1,880. Amount expended on sanitation $276. James Gough, Village Clerk, Port Stanley.

Portland, Tp.—Good opening for canning factory. Number of buildings 7; cost about $10,000. Amount expended on permanent improvements $3,618. Thos. A. Kerr, Township Clerk, Harrowsmith.

Portsmouth, V.—No new buildings erected. Amount expended on permanent improvements $283. Amount expended on sanitation $108. J. W. Henstridge, Village Clerk, Portsmouth.

Powassan, Tn.—General supply company started. Good opening for cannery, box factory and foundry. Number of buildings erected 12; cost $25,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation $500. L. G. Phillips, Town Clerk, Powassan.

Prescott, Tn.—Owns and operates waterworks; cost $65,000; electric light plant $25,000. Openings for any manufactures. Number of buildings erected 6; cost $15,000. Amount expended on permanent improvements $4,500. Geo. Rook, Town Clerk, Prescott.

Preston, Tn.—Motor car factory and shoe factory started. Owns and operates waterworks, cost $85,340; electric light plant $43,571. Good openings for all kinds of industries. Number of buildings erected about 60; cost about $80,000. Amount expended on permanent improvements $4,000. Amount expended on sanitation about $8,000. H. C. Edgar, Town Clerk, Preston.

Prince, Tp.—No new buildings erected. Amount expended on permanent improvements $1,400. Robt. Liddle, Township Clerk, Sault Ste. Marie West.

Puslinch, Tp.—Waggon factory started. Number of buildings erected about 50; cost about $70,000. Amount expended on permanent improvements about $4,760, besides 3,600 days' statute labour. Amount expended on sanitation $80. Geo. J. Meldrum, Township Clerk, Morriston.

Rainham, Tp.—Good openings for various industries; abundance of natural gas. Number of buildings erected about 15; cost about $10,000. Amount expended on permanent improvements about $900. L. F. Culver, Township Clerk, Rainham.

Rainy River, Tn.—Barrel and stave factory started; waterworks being installed. Opening for excelsior factory, flour mill, mattress factory, sash and door factory. Number of buildings erected 20; cost $26,600. Amount expended on permanent improvements $1,420. J. H. Wilson, Town Clerk, Rainy River.

Raleigh, Tp.—Good opening for beet sugar factory. Number of buildings erected about 25; cost about $25,000. Amount expended on permanent improve-

ments $3,000. Amount expended on sanitation $75. A. E. Robinson, Township Clerk, Buxton.

Rama, Tp.—Good openings for limestone quarries, white and buff, adjoining C.N.O.R. Number of buildings erected 5; cost about $6,000. Amount expended on permanent improvements $3,100. W. M. Shields, Township Clerk, O'Connell.

Ramsey, Tp.—Number of buildings erected 4; cost $2,500. Amount expended on permanent improvements $4,225. T. A. Thompson, Township Clerk, Almonte.

Ratter and Dunnett, Tps.—Number of buildings erected 5; cost about $3,900. Amount expended on permanent improvements $1,200 by Government. Amount expended on sanitation $83. Emile Langlois, Township Clerk, Warren.

Rawdon, Tp.—Number of buildings erected 4 or 5; cost from $1,000 to $2,000. Amount expended on permanent improvements $1,000, besides 3,288 days' statute labour. W. F. Bateman, Township Clerk, Spring Brook.

Rayside, Tp.—Number of buildings erected 3; cost $700. Amount expended on permanent improvements $366. E. Bonin, Township Clerk, Boninville.

Reach, Tp.—No new buildings erected. Amount expended on permanent improvements about $1,425. Amount expended on sanitation $40. W. F. Dobson, Township Clerk, Manchester.

Renfrew, Tn.—Cream separator factory and sash and door factory started. Owns and operates waterworks; cost $100,000. Good openings for woodworking factory or any industries requiring power. Number of buildings erected about 8; cost about $15,000. Amount expended on permanent improvements $8,000. Amount expended on sanitation about $4,000. J. K. Rochester, Town Clerk, Renfrew.

Richmond, Tp.—Number of buildings erected 6; cost $1,000. Amount expended on permanent improvements $1,500. Amount expended on sanitation $25. Abram Winters, Township Clerk, Selby.

Richmond West, V.—Good openings for grist mill, saw mill, shingle mill and blacksmith's shop. Number of buildings erected 3; cost $1,125. Amount expended on permanent improvements $560. John Kielly, Village Clerk, Richmond West.

Richmond Hill, V.—Number of buildings erected 3; cost about $4,000. Amount expended on permanent improvements about $500. A. J. Hume, Village Clerk, Richmond Hill.

Ridgetown, Tn.—Good openings for canning factory and machine shop. Number of buildings erected 5; cost $2,500. Amount expended on permanent improvements $300. Amount expended on sanitation $200. D. Cochrane, Town Clerk, Ridgetown.

Rochester, Tp.—Owns and operates municipal telephone system (in trust for 220 subscribers); cost $8,219. Good opening for butter factories, and for growing of fruit and vegetables. Number of buildings erected 4; cost about $3,500. Amount expended on permanent improvements $5,468. Amount expended on sanitation $105. M. N. Mousseau, Township Clerk, Woodslee.

Rockland, Tn.—Good openings for brickyard, cement works, foundries and other industries. Number of buildings erected about 10; cost about $15,000. Amount expended on permanent improvements $2,177. James L. Legrois, Town Clerk, Rockland.

Roddick, Tp.—See Alberton and Roddick, Tps.

Rodney, V.—Good opening for foundry. Number of buildings erected 2; cost $3,000. Amount expended on permanent improvements $552. J. D. Shaw, Village Clerk, Rodney.

Rolph, Buchanan and Wylie, Tps.—Number of buildings erected 4; cost $1,500. Amount expended on permanent improvements $615, including statute labour. Florence McCarthy, Township Clerk, Wylie.

Romney, Tp.—Brick and tile yard started. Number of buildings erected 4; cost $10,000. Amount expended on permanent improvements $1,997. Amount expended on sanitation $128. J. W. Kennedy, Township Clerk, Wheatley.

Ross, Tp.—Number of buildings erected 10; cost $8,000. Amount expended on sanitation $21. P. R. Pounder, Township Clerk, Forester's Falls.

Roxborough, Tp.—Amount expended on permanent improvements $18,242. D. A. McDiarmid, Township Clerk, Sandringham.

Russell, Tp.—Knitting and woollen factory started. Good openings for brickyard and sash and door factory. Number of buildings erected about 20; cost about $25,000. Amount expended on permanent improvements $5,000. P. E. Guerin, Township Clerk, Embrun.

Ryde, Tp.—Number of buildings erected 3; cost $2,500. Amount expended on permanent improvements $800. Wm. Lowe, Township Clerk, Barkway.

Ryerson, Tp.—Number of buildings erected 3; cost about $2,500. Amount expended on permanent improvements $565. Robt. Bradley, Township Clerk, Burk's Falls.

St. Catharines, C.—Factory for automobile machinery and electrical supplies, machine shop and gasoline engines, knitting and woollen factories, basket factory, and additions. Owns and operates waterworks, cost $340,000; owns third interest in gas works, cost $150,000. Good openings for any factories requiring water or electric power, natural gas and transportation facilities by land or water. Number of buildings erected 73; cost $95,000. Amount expended on permanent improvements $67,000. Amount expended on sanitation about $14,000. J. Albert Pay, City Clerk, St. Catharines.

St. Joseph, Tp.—Number of buildings erected 25; cost $13,410. Amount expended on permanent improvements $1,750. H. M. Ross, Township Clerk, Richard's Landing.

St. Mary's, Tn.—Owns and operates waterworks, cost $65,000; electric light plant, cost $20,000. Good openings for cement and stone industries, shoe factory, goods made of iron, steel or wood. Number of buildings erected 8; cost $16,000. Amount expended on permanent improvements $6,828. T. M. Clark, Town Clerk, St. Mary's.

St. Thomas, C.—Owns and operates waterworks, cost $275,000; street railway, cost $75,000; gas and electric light plant $250,000. Good openings for automobile factory or iron works of any kind. Number of buildings erected 152; cost $261,600. Amount expended on permanent improvements $13,000. Amount expended on sanitation $4,000. W. B. Doherty, City Clerk, St. Thomas.

Salter, May and Harrow, Tps.—Cheese factory and small sawmill started. Good opening for woollen mill, with abundant unused water power. Number of buildings erected about 15; cost about $8,000. Amount expended on permanent improvements $200. Amount expended on sanitation $10. Oscar Cole, Township Clerk, Massey.

SALTFLEET, Tp.—Good openings for planing mill or jam and canning factory. Number of buildings erected 18; cost $25,000. Amount expended on permanent improvements $3,000. Amount expended on sanitation $80. Erland Lee, Township Clerk, Stoney Creek.

SANDFIELD, Tp.—Good openings for sawmill, shingle, lath and planing mill. Thaddeus W. Thompson, Township Clerk, Big Lake P.O.

SANDWICH, Tn.—Good openings for soda ash plant, iron works, mineral springs resort and other industries. Number of buildings erected 17; cost $15,000. Amount expended on permanent improvements $2,000. Amount expended on sanitation $50,000. E. R. North, Town Clerk, Sandwich.

SANDWICH E., Tp.—Automobile factory started. Good opening for any industry. Number of buildings erected 16; cost about $29,000. Amount expended on permanent improvements $11,300. Amount expended on sanitation $500. John Dugal, Township Clerk, Tecumseh.

SANDWICH S., Tp.—Number of buildings erected 7; cost $10,400. Amount spent on permanent improvements $4,000. J. Moynahan, Township Clerk, Windsor.

SANDWICH W., Tp.—Openings for steel plant, etc. Number of buildings 26; cost $33,000. Amount expended on permanent improvement $9,600. Amount expended on sanitation $150. Ernest Bondy, Township Clerk, Canard River.

SARAWAK, Tp.—No new buildings erected. Amount expended on permanent improvements $700. Amount expended on sanitation $43. Wm. Morton, Township Clerk, East Linton.

SARNIA, Tn.—Natural gas plant started. Owns and operates waterworks; value $225,000. Good openings for any kind of manufacturing. Number of buildings erected about 16; cost about $36,800. Amount expended on permanent improvements $26,852. Amount expended on sanitation $15,555. J. D. Stewart, Town Clerk, Sarnia.

SARNIA, Tp.—Good opening for canning factory. Number of buildings erected about 12; cost about $20,000. Amount expended on permanent improvements $5,000. H. D. Kewley, Township Clerk, Sarnia.

SAUGEEN, Tp.—Number of buildings erected 8 or 9; cost about $8,000. Amount expended on permanent improvements $3,162. Amount expended on sanitation $20. F. W. Elliott, Township Clerk, Port Elgin.

SAULT STE. MARIE, Tn.—Good opening for chair factory and other woodworking industries. Number of buildings erected 75; cost $150,000. Amount expended on permanent improvements $22,668. Amount expended on sanitation $2,343. C. J. Pim, Town Clerk, Sault Ste. Marie.

SCHREIBER, Tp.—Number of buildings erected 31; cost $24,650. Amount expended on permanent improvement about $450 by Government. Geo. A. Evans, Township Clerk, Schreiber.

SCOTT, Tp.—Number of buildings erected 9; cost about $12,000. Amount expended on permanent improvements $2,500. Amount expended on sanitation $119. Allan Gray, Township Clerk, Uxbridge.

SCUGOG, Tp.—Good opening for summer resort. One building erected; cost $1,000. Amount expended on permanent improvements $400. Thos. Graham, Township Clerk, Port Perry.

SEAFORTH, Tn.—Owns and operates waterworks; cost $13,000. Good opening for woollen, knitting or coarse linen factory, with building available. Number of buildings erected 2; cost $8,000. Amount expended on permanent improve-

ments $900. Amount expended on sanitation $800. J. A. Wilson, Town Clerk, Seaforth.

SEBASTOPOL, Tp.—Good openings for creamery, general store, and mining. No new buildings erected. Amount expended on permanent improvements $64. Carl Walther, Township Clerk, Vanbrugh.

SENECA, Tp.—Number of buildings erected 4; cost $3,000. Amount expended on permanent improvements $300. Amount expended on sanitation $60. N. H. Wickett, Township Clerk, York.

SEYMOUR, Tp.—Electric power plant and pulp works started. Openings for all kinds of industries requiring power. Amount expended on permanent improvements $3,952. J. B. Ferris, Township Clerk, Campbellford.

SHEFFIELD, Tp.—Good water power and openings for various industries. Number of buildings erected 5; cost $1,500. Amount expended on permanent improvements $572. Jas. Aylesworth, Township Clerk, Tamworth.

SHELBURNE, V.—Sash and door factory greatly enlarged. Owns and operates waterworks; cost about $24,000. Number of buildings erected 3; cost $6,000. Amount expended on permanent improvements $1,500. N. B. Allen, Village Clerk, Shelburne.

SHERBORNE, etc., Tp.—Good openings for chemical works and hardwood factories. No new buildings erected. Amount expended on permanent improvements $400. Wm. C. Sparks, Jr., Township Clerk, Dorset.

SHERBROOKE, Tp.—One building erected; cost about $95. Amount expended on permanent improvements $55. M. E. Dickson, Township Clerk, Stromness.

SHERBROOKE N., Tp.—See Dalhousie and N. Sherbrooke, Tps.

SHERBROOKE, S., Tp.—Good opening for flour mill and for carding, spinning, and weaving factory. No new buildings erected. Amount expended on permanent improvements $500. H. Rigney, Township Clerk, Maberley.

SHUNIAH, Tp.—Amount expended on permanent improvements $9,267. Wm. Powley, Township Clerk, Port Arthur.

SIDNEY, Tp.—Good opening for various industries; power provided by Government dams on Trent Canal. Amount expended on permanent improvements $3,863. A. M. Chapman, Township Clerk, Belleville.

SIMCOE, Tn.—Owns and operates waterworks; cost $75,835. Good opening for powdered or condensed milk factory, iron, steel or tin manufactures, woodworking industries. Number of buildings erected 21; cost $65,000. Amount expended on permanent improvements $1,400. Amount expended on sanitation about $300. W. C. McCall, Town Clerk, Simcoe.

SMITH, Tp.—Lumber dealers started. Number of buildings erected 6; cost $5,500. Amount expended on permanent improvements $3,684. Amount expended on sanitation $108. J. W. Kelly, Township Clerk, Bridgenorth.

SMITH'S FALLS, Tn.—Owns and operates waterworks; cost $150,000. Openings for various industries. Number of buildings erected 38; cost $80,000. Amount expended on permanent improvements $17,000. Amount expended on sanitation $6,000. J. A. Lewis, Town Clerk, Smith's Falls.

SNOWDON, Tp.—Good openings for sawmills. Number of buildings erected 6; cost about $1,500. Amount expended in permanent improvements $245. E. B. Munn, Township Clerk, Minden.

SOMERVILLE, Tp.—Good opening for brickyard or lime kiln. Sam. Suddaby, Township Clerk, Burnt River.

SOPHIASBURG, Tp.—Number of buildings erected 5; cost about $3,300. Amount expended on permanent improvements $1,237, including $463 for county roads. C. H. Wright, Township Clerk, Demorestville.

SOUTH RIVER, V.—New sawmill started. Openings for woodworking industries, good power available. Number of buildings erected 5; cost $10,000. H. O. Boorse, Town Clerk, South River.

SOUTHAMPTON, Tn.—Furniture and other factories extended. Owns and operates waterworks; cost $33,870. Good openings for upholstery factory, furniture factory, refrigerator factory or any industry requiring cheap electric power. Number of buildings erected 9; cost $3,000. Amount expended on permanent improvements $3,461. J. C. Eckford, Town Clerk, Southampton.

SOUTHWOLD, Tp.—Number of buildings erected 3; cost about $4,000. Amount expended on permanent improvements $8,753. Amount expended on sanitation $81. Malcolm Campbell, Township Clerk, Fingal.

SPRINGER, Tp.—Number of buildings erected about 10; cost about $1,500. Amount expended on permanent improvements about $3,000. Onesime Lafrance, Township Clerk, Sturgeon Falls.

SPRINGFIELD, V.—Planing mill and sash and door factory started. Good opening for apple evaporator. Number of buildings erected 3; cost $8,000. Amount expended on permanent improvements $719. J. B. Lucas, Village Clerk, Springfield.

STAFFORD, Tp.—Good opening for brick and tile works, with unlimited high grade marl. Number of buildings erected 5; cost $7,000. Amount expended on permanent improvements $800. John Kidd, Township Clerk, Stafford.

STANHOPE, Tp.—Steam sawmill started. No new buildings erected. Amount spent on permanent improvements $113. Wm. Cooper, Township Clerk, Boskung.

STANLEY, Tp.—Good opening for cheese factory or creamery. Number of buildings erected 4; cost $8,000. Amount expended on permanent improvements $3,000. J. E. Harnwell, Township Clerk, Varna.

STAYNER, Tn.—Owns and operates waterworks; cost $24,000. Good openings for various industries. No new buildings erected. Amount expended on permanent improvements $252. John Hood, Town Clerk, Stayner.

STEELTON, Tn.—Planing mill, blast furnace, structural steel mill and branches of the steel industry started. Owns and operates waterworks; cost $33,000, but buys the water from private company. Good opening for canoe and boat factory, wooden manufactures, copper smelter, automobile factory, cutlery works, etc. Number of buildings erected about 20; cost about $16,000. Amount expended on permanent improvements $7,904. Amount expended on sanitation $1,168. J. Robinson, Town Clerk, Steelton.

STEPHEN, Tp.—Number of buildings erected 3; cost about $1,500. Amount expended on permanent improvements $8,000. Henry Eilber, Township Clerk, Crediton.

STEPHENSON, Tp.—Good openings for saw mill and wooden industries Amount expended on permanent improvements $570. Amount expended on sanitation $10. David Bain, Township Clerk, Utterson.

STIRLING, V.—Owns and operates electric light plant; cost $10,000. Good openings for small industries requiring electric power. Number of buildings erected 5; cost $19,500. Amount expended on permanent improvements $415. G. G. Thrasher, Village Clerk, Stirling.

STISTED, Tp.—Good openings for blacksmith's shop and general store. Number of buildings erected 2; cost $4,000. Amount expended on permanent improvements about $800. Wm. Quinn, Township Clerk, Yearley's.

STORRINGTON, Tp.—Telephone system started. Number of buildings erected 20; cost $10,000. Amount expended on permanent improvements $2,000. Hugh J. Morland, Township Clerk, Sunbury.

STOUFFVILLE, V.—Vinegar works started. Owns and operates waterworks; cost $25,000. Good opening for foundry, with building available. Number of buildings erected 3; cost $8,500. Amount expended on permanent improvements $1,235. J. Urquhart, Village Clerk, Stouffville.

STRATFORD, C.—Rattan work factory started. Owns and operates waterworks; cost $200,287. Good openings for stove works, carpet factory, metal bedstead factory, carriage and waggon works, automobile factory, linen mill, thread factory, brass foundry, shoe factory, cotton mill, trunk factory and whitewear factory. Number of buildings erected 61; value $139,675. Amount expended on permanent improvements $42,885. Amount expended on sanitation $3,090. R. R. Lang, City Clerk, Stratford.

STRATHROY, Tn.—Furniture factory started. Owns and operates waterworks and electric light plant; cost $60,000. Good openings for brass bedstead factory and ready-made clothing factory. Number of buildings erected 6; cost $31,500. Amount expended on permanent improvements $3,000. Amount expended on sanitation $600. R. Diprose, Town Clerk, Strathroy.

STREETSVILLE, V.—Owns and operates electric light plant; value $28,000. Good opening for any industry. Number of buildings erected 3; cost $6,500. Amount expended on permanent improvements $800. S. H. Smith, Village Clerk, Streetsville.

STRONG, Tp.—New sawmill started. Good openings for cement plant, grist mill or electric light plant. Number of buildings erected 3; cost about $2,000. Amount expended on permanent improvements about $1,700. Amount expended on sanitation $10. A. M. Church, Township Clerk, Sundridge.

STURGEON FALLS, Tn.—Owns and operates waterworks; cost $46,812. Good openings for grist mill, furniture factory, sash and door factory, wood paving block factory, box factory, woollen mills, etc. Number of buildings erected 2; cost about $2,000. Amount expended on permanent improvements $2,997. Amount expended on sanitation $999. J. D. Cockburn, Town Clerk, Sturgeon Falls.

STURGEON POINT, V.—No new buildings erected. Amount expended on sanitation $129. G. H. Hopkins, Village Clerk, Lindsay.

SUDBURY, Tn.—Foundry started. Owns and operates waterworks, and electric light plant; cost $142,052. Good openings for manufactures of many kinds. Number of buildings erected 87; cost about $185,000. Amount expended on permanent improvements $7,947. Amount expended on sanitation $1,430. Geo. Elliott, Town Clerk, Sudbury.

SULLIVAN, Tp.—Number of buildings erected about 15; cost about $15,000. Amount expended on permanent improvements $500. A. Stephen, Township Clerk, Desboro.

SUNDRIDGE, V.—Good openings for furniture factories and wooden ware industries. Number of buildings erected 3; cost about $700. Amount expended on permanent improvements $200. John Harper, Village Clerk, Sundridge.

SUNNIDALE, Tp.—Good opening for cheese factory, or for cement works, with unlimited supply of marl. Number of buildings erected about 20; cost about

$5,000. Amount expended on permanent improvements about $1,600, exclusive of county roads. Thos F. Burrows, Township Clerk, Stayner.

Sutton, V.—Good openings for woollen mill, cement brick factory and small foundry. Number of buildings erected 5; cost about $5,000. Amount expended on permanent improvements $1,006. Amount expended on sanitation $16. F. G. Tremayne, Village Clerk, Sutton West.

Sydenham, Tp.—Good opening for cheese and butter factory. Number of buildings erected 4; cost about $3,000. Amount expended on permanent improvements $2,674. Jas Cannon, Township Clerk, Annan.

Tara, V.—Good openings for almost any kind of industry. One building erected; cost $1,800. Amount expended on sanitation $24. W. J. Taylor, Village Clerk, Tara.

Tarentorus, Tp.—Good opening for cement block factory. Number of buildings erected 15; cost $6,600. Amount expended on permanent improvements $2,766. Amount expended on sanitation $14. B. R. McMullin, Township Clerk. Sault Ste. Marie.

Tavistock, V.—Good opening for foundry. Number of buildings erected 8; cost about $12,000. Amount expended on permanent improvements about $1,500. J. G. Freeld, Village Clerk, Tavistock.

Tay, Tp.—Grain elevator started. Openings for manufacturing of all kinds. Amount expended on permanent improvements $2,527. T. W. Brown, Township Clerk, Victoria Harbour.

Tecumseth, Tp.—Number of buildings erected about 5; cost about $5,000. Amount expended on permanent improvements, about $5,000. Wm. Lilly, Township Clerk, Beeton.

Teeswater, V.—Evaporating works started. Owns and operates waterworks; cost $14,000. Good opening for canning factory and novelty turning works. Number of buildings erected 4; cost $7,500. Amount expended on permanent improvements $300. John Farquhar, Village Clerk. Teeswater.

Tehkummah, Tp.—Number of buildings erected 3; cost about $1,500. Amount expended on permanent improvements about $500. Jas E. Hopkin, Township Clerk, Tehkummah.

Thamesville, V.—Owns and operates electric light plant; cost $6,250. Openings for various industries. Number of buildings erected 2; cost about $10,000. Amount expended on permanent improvements about $500. W. J. Cryderman, Village Clerk, Thamesville.

Thedford, V.—No new buildings erected; some remodeled. Amount expended on permanent improvements about $500. Amount expended on sanitation $30. Wm. Brooks, Village Clerk, Thedford.

Thessalon, Tn.—Owns and operates waterworks; cost $25,280; electric light plant; cost $11,230. Good openings for planing mill, box factory, woollen mill and tannery. Number of buildings erected about 12; cost about $47,500. Amount expended on permanent improvements about $13,000, including sewers. C. A. Batson, Town Clerk, Thessalon.

Thessalon, Tp.—One building erected; cost $350. Amount expended on permanent improvements, $895. Theo. E. Clinton, Township Clerk, Thessalon.

Thompson, Tp.—Good openings for sawmill, box factory and blacksmith's shop. One building, Baptist Church, erected; cost $600. Amount expended on permanent improvements $112. Wm. Rowan, Township Clerk, Dean Lake.

THORAH, Tp.—Number of buildings erected 9; cost $3,550. Amount expended on permanent improvements $1,288. Amount expended on sanitation $66. John McArthur, Township Clerk, Beaverton.

THORNBURY, Tn.—Good openings for almost any industry. Number of buildings erected 3; cost about $5,400. Edw. Rorke, Town Clerk, Thornbury.

THOROLD, Tn.—Pulp factory and basket factory started. Owns and operates waterworks, cost $90,000; electric light plant, cost $50,000. Openings for industries of any character. Number of buildings erected 7; cost $5,000. Amount expended on permanent improvements $1,000. Amount expended on sanitation $3,500. D. J. C. Munro, Town Clerk, Thorold.

THOROLD, Tp.—Good openings for industries, with electric power and transportation facilities by land and water. Number of buildings erected 5; cost $3,000. Amount expended on permanent improvements $5,200. A M. Clark, Township Clerk, Fonthill.

THURLOW, Tp.—Drill and mining machinery factory and works for quarrying and crushing stone started. Good openings for canning factories, tanneries, paper mills, cement works and other industries requiring the exceptional electric power available. Number of buildings erected 14; cost $48,000. Amount expended on permanent improvements, $3,600. C. A. Callery, Township Clerk, Cannifton.

TILBURY, Tn.—Owns and operates waterworks; cost $16,176; water obtained from M.C.R. Good opening for brick and tile yard, glass factory, pork packing plant, creamery, apple evaporator, machine shop and basket factory. Number of buildings erected 6; cost $10,500. A. A. Wilson, Town Clerk, Tilbury.

TILBURY E., Tp.—Brick and drain tile yard, cement block factory, and ditching machine started. Owns and operates concrete tile plant; value $1,000. Good openings for beet sugar factory. Number of buildings erected 11; cost about $12,000. Amount expended on permanent improvements about $1,500. Amount expended on sanitation about $50. Alex Farquharson, Township Clerk, Fletcher.

TILBURY N. Tp.—Canning factory started. Number of buildings erected 5; cost about $8,000. Amount expended on permanent improvements $2,000. J. A. Tremblay, Township Clerk, Tilbury.

TILBURY W. Tp.— Number of buildings erected, 30; cost about $20,000. Amount expended on permanent improvements $7,500. Amount expended on sanitation $225. S. T. Anderson, Township Clerk, Comber.

TILLSONBURG, Tn.—Good openings for various industries. Number of buildings erected 10; cost $25,000 Amount expended on permanent improvements $5,000. Alfred E. Raynes, Town Clerk, Tillsonburg.

TINY, Tp.—New sawmill started. Number of buildings erected 16; cost about $15,000. Amount expended on permanent improvements $2,395. M. Beaudoin, Township Clerk, Lafontaine.

TIVERTON, V.—No new buildings erected. Amount expended on permanent improvements $502. A. E. Ord, Village Clerk, Tiverton.

TORBOLTON, Tp.—Good opening for brick and tile yard. Amount expended on permanent improvements $421. D. B. Maclaren, Township Clerk, Dirleton.

TORONTO, C.—Brake shoe factory, laundry machine factory, soap factory, welders iron and steel, saws and tools factory, carbon batteries factory, chemical factory, bath tubs factory, heavy boot factory, and drug establishment. Owns and operates waterworks, value $7,000,000; electric light plant, value $40,000. Good openings for smelters, iron manufactures of all descriptions, mantle tiles, small

wares, automobile accessories. Number of buildings erected 7,184; value about $18,139,247. Amount expended on permanent improvements $1,850,104. Amount expended on sanitation $301,810. W. A. Littlejohn, City Clerk, Toronto.

Toronto, Tp.—Oriental textiles factory started. Good opening for planing mill at Cooksville. Number of buildings erected 25; cost $35,700. Amount expended on permanent improvements $10,000. Amount expended on sanitation $190. Ch. H. Gill, Township Clerk, Dixie.

Toronto Gore, Tp.—Number of buildings erected, 7; cost $9,000. Amount expended on permanent improvements $3,000. Amount expended on sanitation $170. N. Harrison, Township Clerk, Castlemore.

Toronto North, Tn.—Lumber yard started. Owns and operates waterworks and electric light plant. Number of buildings erected about 100; cost about $150,000. Amount expended on permanent improvements $11,964. Amount expended on sanitation $200. W. J. Douglas, Town Clerk, Eglinton.

Tossorontio, Tp.—Number of buildings erected 3; cost $5,000. Amount expended on permanent improvements $500, besides 1,400 days statute labour. Thos. Irwin, Township Clerk, Lisle.

Tottenham, V.—Owns and operates electric light plant; cost $6,000. Number of buildings erected 2; cost about $1,600. Amount expended on permanent improvements $6,240. R. T. McCabe, Village Clerk, Tottenham.

Townsend, Tp.—Number of buildings erected about 20; cost about $25,000. Amount expended on permanent improvements $5,225. Amount expended on sanitation $200. Jas. Ross, Township Clerk, Waterford.

Trafalgar, Tp.—Good opening for brick yard. Amount expended on permanent improvement $4,000. Ch. Hall, Township Clerk, Trafalgar.

Trenton, Tn.—Has an interest in waterpower, but does not operate. Good openings for any industries requiring electric motive power. Number of buildings erected about 15; cost about $25,000. Amount expended on permanent improvements $6,000. By-laws passed and contract let for sewers costing $5,000. G. W. Ostrom, Town Clerk, Trenton.

Tudor and Cashel, Tps.—No new buildings erected. Amount expended on permanent improvements $2,287. Chas. Donaldson, Jr., Township Clerk, Millbridge.

Turnberry, Tp.—Number of buildings erected about 14; cost about $19,000. Amount expended on permanent improvements $1,140. Amount expended on sanitation $35. John Burgess, Township Clerk, Bluevale.

Tweed, V.—Addition to hub factory started. Good openings for small woollen mill, cooperage, canning factory, wooden ware industries or anything requiring light power. Number of buildings erected 6; cost $10,700. Wm. Wray, Village Clerk, Tweed.

Usborne, Tp.—Cement concrete tile factory started. Good openings for butter factories. Number of buildings erected 2; cost about $6,000. Amount expended on permanent improvements $3,712. Amount expended on sanitation $30. Fr. Morley, Township Clerk, Whalen .

Uxbridge, Tn.—Owns and operates waterworks for fire protection; cost $15,000. Good openings for planing mill, boot and shoe factory, furniture factory and novelty works. No new buildings erected. Amount expended on permanent improvements $1,376. Amount expended on sanitation $230. M. H. Crosley, Town Clerk, Uxbridge.

Uxbridge, Tp.—Number of buildings erected about 12; cost about $15,000. Amount expended on permanent improvements $1,000. Jas. H. Millard, Township Clerk, Altona.

Van Horne, Tp.—Good openings for pulp mill and grist mill. Number of buildings erected 9; cost about $4,000. Amount expended on permanent improvements $750. J. W. Hatch, Township Clerk, Dryden.

Vankleek Hill, Tn.—Good openings for carriage factory and canning works. Number of buildings erected 4; cost about $8,000. Amount expended on permanent improvements $2,590. H. C. Jones, Town Clerk, Vankleek Hill.

Vaughan, Tp.—Number of buildings erected about 50; cost about $50,000. Amount expended on permanent improvements $11,560. J. B. McLean, Township Clerk, Maple.

Verulam, Tp.—Good openings for industries requiring electric power. Number of buildings erected 5; cost about $2,800. Amount expended on permanent improvements $3,300. Geo. W. Taylor, Township Clerk, Bobcaygeon.

Vespra, Tp.—Good opening for glass factory, or cement tile and brick works. Number of buildings erected 25; cost about $12,500. Amount expended on permanent improvements $1,357. Amount expended on sanitation $17. A. B. Coutts, Township Clerk, Barrie.

Vienna, V.—Good opening for any kind of industry. Number of buildings erected 2; cost $400. Amount expended on permanent improvements $430. Sam. Clutton, Village Clerk, Vienna.

Wainfleet, Tp.—Number of gas wells started. Good opening for making concrete blocks and tiles. Number of buildings erected about 25; cost about $25,000. Amount expended on permanent improvements about $6,000. Jas. Henderson, Jr., Township Clerk, Marshville.

Walkerton, Tn.—Rope and twine factory started. Owns and operates waterworks; cost $55,000. Good openings for foundry, hose factory, apple evaporator and canning factory. Number of buildings erected 3; cost about $5,000. Amount expended on sanitation $222. I. H. Scott, Town Clerk, Walkerton.

Walkerville, Tn.—Two automobile factories, and steel and wood products factory started. Good openings for various industries. Number of buildings erected about 30; cost about $52,360. Amount expended on permanent improvements $18,000. Amount expended on sanitation $10,636. Cecil H. Robinson, Town Clerk, Walkerville.

Wallace, Tp.—Amount expended on permanent improvements $1,800. David Green, Township Clerk, Brotherston.

Wallaceburg, Tn.—Refining works started. Good openings for soda ash plant, shipbuilding yard, and steel plant. Number of buildings erected 36; cost $208,950. Amount expended on permanent improvements $1,100. Amount expended on sanitation $100. H. E. Johnson, Town Clerk, Wallaceburg.

Walpole, Tp.—Good opening for brick yard. Number of buildings erected 10; cost about $10,000. Amount expended on permanent improvements $7,315. Amount expended on sanitation $145. S. A. Thompson, Township Clerk, Nanticoke.

Walsingham N., Tp.—New creamery started. Good openings for natural gas wells. Number of buildings erected 5; cost $7,000. Amount expended on permanent improvements $4,275. Edgar J. Hodson, Township Clerk. Langton.

Wardsville, V.—Good openings for evaporating plant, woollen mill and foundry. One new building erected; cost about $1,400. Amount expended on per-

manent improvements about $500. Amount expended on sanitation about $100. Wm. A. Minna, Village Clerk, Wardsville.

WARWICK, Tp.—Amount expended on permanent improvements $2,500. N. Herbert, Township Clerk, Warwick.

WATERDOWN, V.—Good opening for grist mill. Number of buildings erected 2; cost $1,000. Amount expended on permanent improvements $1,300. Amount expended on sanitation $20. J. C. Medlar, Village Clerk, Waterdown.

WATERFORD, V.—Factories for telephones and parts started. Good openings for foundry and machine shop and for cheese and butter factory. Number of buildings erected 11; cost about $30,000, including telephone factory. Amount expended on permanent improvements $621. Amount expended on sanitation $275. Jas. Ross, Village Clerk, Waterford.

WATERLOO, Tn.—Trunk factory and collar and cuff factory started. Owns and operates waterworks, cost $80,000; gas plant, cost $30,000. An electric light plant, to cost $40,000, is in construction. Good opening for planing mill. Number of buildings erected about 35; cost about $65,000. Amount expended on permanent improvements $13,800. Amount expended on sanitation $8,000 for sewers. F. S. Kumpf, Town Clerk, Waterloo.

WATERLOO, Tp.—Amount expended on permanent improvements $2,668. Geo. A. Tilt, Township Clerk, Blair.

WATERS, Tp.—No new buildings erected. Amount expended on permanent improvements $1,470. P. G. Gaudrault, Township Clerk, Copper Cliff.

WATFORD, V.—Good opening for wire mattress factory. No new buildings erected. Amount expended on sanitation $200. W. S. Fuller, Village Clerk. Watford.

WATT, Tp.—Good opening for sawmill. Number of buildings erected about 8; cost about $4,500. Amount expended on permanent improvements $817. Edw. Hamilton, Township Clerk, Raymond.

WAWANOSH E., Tp.—Number of buildings erected 6; cost $3,900. Amount expended on permanent improvements, $2,304. Alex. Porterfield, Township Clerk, Marnoch.

WAWANOSH W., Tp.—Amount expended on permanent improvements $1,500. W. S. McCrostie, Township Clerk, St. Helens.

WEBBWOOD, Tn.—Number of buildings erected 4; cost $16,000. Amount expended on permanent improvements $2,000. Amount expended on sanitation $250. S. Hawkins, Town Clerk, Webbwood.

WELLAND, Tn.—Owns and operates waterworks; cost $98,000, with $52,000 to be spent immediately. Good openings for various industries. Number of buildings erected about 100; cost about $200,000. Amount expended on permanent improvements $15,746. Amount expended on sanitation $38,208. Geo. R. Boyd, Town Clerk, Welland.

WELLESLEY, Tp.—Hoop, stave and heading factory started. Good opening for felt slipper factory. Number of buildings erected about 10; cost about $8,000. Amount expended on permanent improvements $4,056. Amount expended on sanitation $662. P. T. Schummer, Township Clerk, St. Clements.

WELLINGTON, V.—Good openings for any industry but canning. Number of buildings erected 6; cost about $6,000. Amount expended on permanent improvements $100. Amount expended on sanitation $100. E. A. Titus, Village Clerk, Wellington.

West Lorne, V.—Wood turning factory and cheese factory started. Good opening for basket and veneer factory, collar factory, apple evaporator and tobacco factory. Number of buildings erected about 6; cost about $7,000. Amount expended on permanent improvements, $712. Amount expended on sanitation $670. J. S. Robertson, Village Clerk. Box 13, St. Thomas.

Westmeath, Tp.—Amount expended on permanent improvements $2,477. Amount expended on sanitation $5. Hugh S. Miller, Township Clerk, Beachburg.

Westminster, Tp.—Amount expended on permanent improvements $7,238. Amount expended on sanitation $365. Geo. Riddell, Township Clerk, Wilton Grove.

Weston, V.—Owns and operates electric light plant; cost between $11,500 and $12,000. Good openings for various industries, with two main railway lines. Number of buildings erected about 12; cost about $25,000. Amount expended on permanent improvements about $2,500. J. H. Taylor, Village Clerk, Weston.

Westport, V.—Good opening for malleable iron foundry. No new buildings erected. Amount expended on permanent improvements $1,600. W. S. Ripley, Village Clerk, Westport.

Whitby, Tn.—Horse blanket, whip and collar factory started. Owns and operates waterworks, cost $55,449; electric light plant, cost $26,191. Opening for almost any factory. Number of buildings erected 2; cost $6,000. Amount expended on permanent improvements $2,400. Jos. White, Town Clerk, Whitby.

Whitby, Tp.—Number of buildings erected about 15; cost about $10,600. Amount expended on permanent improvements $1,500. D. Holliday, Township Clerk, Brooklin.

Whitby E., Tp.—Number of buildings erected 4; cost $6,000. Amount expended on permanent improvements $3,200. Wm. Purves, Township Clerk, Columbus.

Whitchurch, Tp.—Number of buildings erected 5; cost $6,800. Amount expended on permanent improvements $2,283, besides statute labour. J. C. Lundy, Township Clerk, Newmarket.

Wiarton, Tn.—Owns and operates waterworks; value about $50,000. Good opening for pressed brick factory. Number of buildings erected about 5; cost about $5,000. Amount expended on permanent improvements $493. W. J. Ferguson, Town Clerk, Wiarton.

Wicklow, Tp.—See Bangor, McClure and Wicklow Townships.

Widdifield, Tp.—Number of buildings erected 125; cost about $72,500. Amount expended on permanent improvements $2,871. J. A. Carmichael, Township Clerk, North Bay.

Wilberforce and North Algona, Tps.—Good opening for cement factory and cement brick and tile works. Thos. McKibbon, Township Clerk, Eganville.

Williams E., Tp.—Amount expended on permanent improvements about $2,100, besides statute labour. D. A. Stewart, Township Clerk, Nairn.

Williams W., Tp.—Good opening for cheese factory or creamery. One new building erected; cost $700. Amount expended on permanent improvements $3,092. Wm. Dawson, Township Clerk, Parkhill.

Williamsburg, Tp.—Good opening for sash and door factory. Number of buildings erected 4; cost about $6,500. Amount expended on permanent improvements $7,100. Amount expended on sanitation $15. Geo. Lane, Township Clerk, Bouck's Hill.

WILLOUGHBY, Tp.—Good opening for natural gas industry, also for factories requiring electric power. Number of buildings erected 4; cost about $4,000. Amount expended on permanent improvements about $700, besides statute labour. Donald Dell, Township Clerk, Chippawa.

WILMOT, Tp.—Creamery started. Good opening for foundry. Number of buildings erected 14; cost about $26,000. Amount expended on permanent improvements $5,000. Amount expended on sanitation $300. F. Holwell, Township Clerk, Baden.

WINCHESTER, Tp.—Number of buildings erected about 15; cost about $15,000. Amount expended on permanent improvements $5,009. Geo. Quart, Township Clerk, Winchester.

WINCHESTER, V.—Good opening for pork packing. One new building erected; cost $2,600. Amount expended on permanent improvements $12,250. Hugh McMaster, Village Clerk, Winchester.

WINDHAM, Tp.—Amount expended on permanent improvements $9,512, including road work. Robt. Greer, Township Clerk, Windham Centre.

WINDSOR, C.—Cereal food factory and confectionery factory started. Owns and operates waterworks, cost $300,000; electric light plant, about $40,000. Number of buildings erected 141; cost $423,885. Amount expended on permanent improvements $43,970. Amount expended on sanitation $9,069. Stephen Lusted, City Clerk, Windsor.

WINGHAM, Tn.—Tannery and glove works re-opened. Owns and operates waterworks, value $370,000; electric light plant, value $300,000. Good openings for casket factory, boot and shoe factory, biscuit factory, ready-made clothing establishment. Number of buildings erected 4; cost $10,000. Amount expended on permanent improvements, $2,036. John F. Groves, Town Clerk, Wingham.

WOLFE ISLAND, Tp.—Owns and operates steam ferry; cost $20,000. Good opening for canning factory. Number of buildings erected about 4; cost about $4,000. Amount expended on permanent improvements about $350. D. J. Dawson, Township Clerk, Kingston.

WOLFORD, Tp.—Number of buildings erected about 8; cost about $4,000. Amount expended on permanent improvements $5,500. David Lynch, Township Clerk, Jasper.

WOLLASTON, Tp.—Good openings for mining. No new buildings erected. Amount expended on permanent improvements $1,230. Alex. Miller, Township Clerk, Coe Hill.

WOOD, Tp.—See Medora and Wood Tps.

WOODBRIDGE, V.—Owns and operates street lights; cost about $100. Good opening for large factory, with building available. Number of buildings erected 2; cost $3,000. Amount expended on permanent improvements $500. Ed. W. Brown, Village Clerk, Woodbridge.

WOODHOUSE, Tp.—Butter factory, cement tile works and grinding alfalfa started. Good openings for broom factory and cement tile works. Number of buildings erected about 17; cost about $21,000. Amount expended on permanent improvements $2,500. Amount expended on sanitation about $50. Fr. Bowlby, Township Clerk, Simcoe.

WOODSTOCK, C.—Factory for firearms and metal specialties and knitting factory started. Owns and operates waterworks, cost $214,925; and electric light and power plants, cost $72,117. Openings for boot and shoe factory, shirt factory, rubber factory, stove factory, plough factory, etc. Number of buildings erected

about 20; cost about $75,000. Amount expended on permanent improvements $10,500. Amount expended on sanitation $2,884. John Morrison, City Clerk, Woodstock.

Woodville, V.—Shoemaking started. Owns and operates electric street lighting plant (power from Cannington); cost $1,200. Openings for most industries. No new buildings erected. Amount expended on permanent improvements about $75. J. C. Gilchrist, Village Clerk, Woodville.

Woolwich, Tp.—Number of buildings erected about 14; cost about $8,000. Amount expended on permanent improvements $2,500. W. J. Snider, Township Clerk, Conestogo.

Worthington and Blue, Tps.—Good opening for stave and box factories. Number of buildings erected 4; cost about $1,600. Amount expended on permanent improvements $780. Holger Engenbretsen, Township Clerk, Sleeman.

Wroxeter, V.—Owns and operates electric light plant; cost $1,600. Good openings for evaporator, planing mill and building contractor. Number of buildings erected 2; cost $3,500. Amount expended on permanent improvements $204. J. Brethaur, Village Clerk, Wroxeter.

Wyoming, V.—Good opening for canning factory and basket factory. Number of buildings erected 4 or 5; cost about $5,000. H. G. Taylor, Village Clerk, Wyoming.

Yarmouth, Tp.—Openings for cheese factory and fruit evaporator. Number of buildings erected 17; cost about $27,000. Amount expended on permanent improvements $21,000. Amount expended on sanitation $2,000. W. C. Caughell, Township Clerk, St. Thomas.

Yonge Front, Tp.—Number of buildings erected about 4; cost about $1,200. Amount expended on permanent improvements about $300. F. H. Mallory, Township Clerk, Mallorytown.

Yonge and Escott Rear, Tps.—Good openings for sawmill and cheese-box factory. Number of buildings erected 2; cost about $3,000. Amount expended on permanent improvements $881. R. E. Cornell, Township Clerk, Athens.

York, Tp.—Number of buildings erected about 250; cost about $150,000. Amount expended on permanent improvements $39,401. Amount expended on sanitation $2,387. W. A. Clarke, Township Clerk, 40 Jarvis St., Toronto.

Zone, Tp.—No new buildings erected. Amount expended on permanent improvements $1,200. Amount expended on sanitation $18. Henry Osborne, Township Clerk, Dante.

Zorra E. Tp.—Good opening for tile factory. Number of buildings erected 38; cost $28,200. Amount expended on permanent improvements $10,000. Amount expended on sanitation $150. Jas. Anderson, Township Clerk, Hickson.

Zorra W. Tp.—Number of buildings erected about 7; cost about $2,000. Amount expended on permanent improvements about $6,000. E. L. Sutherland. Township Clerk, Embro.

STATISTICS TABULATED.

The preceding returns by the municipal clerks, as far as statistics are concerned, have been tabulated as follows, thus giving a clear view of the expenditure on new buildings, permanent improvements and sanitation. The additional column, introduced two years ago, has been repeated, showing the public utilities owned and operated by the municipalities, with the capital thus invested.

MUNICIPAL STATISTICS.

(C. city; Tn. town; V. village; Tp. township.)

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Acton, V.	6	7,000	1,338	.....	8,200
Adelaide, Tp.	3	5,000	3,000	.....	.....
Admaston, Tp.	3	2,500	800	.....	.....
Adolphustown, Tp.	.....	.....	300	.....	.....
Ailsa Craig, V.	.....	.....	269	1,444	.....
Albemarle, Tp.	5	3,400	1,000	26	200
Alberton, Tp.	.....	.....	3,615	.....	.....
Albion, Tp.	12	18,000	3,000	.....	.....
Aldborough, Tp.	20	30,000	3,000	.....	.....
Alexandria, Tn.	.....	.....	2,500	.....	47,500
Alfred, Tp.	40	20,000	1,000	.....	.....
Algona S., Tp.	3	1,450	300	.....	.....
Alice and Fraser, Tps.	.....	.....	400	.....	.....
Alliston, Tn.	4	5,800	500	900	19,000
Almonte, Tn.	50	50,000	15,000	.....	38,000
Alnwick, Tp.	2	1,000	2,000	40	.....
Alvinston, V.	4	3,500	2,200	800	.....
Amabel	.....	.....	1,742	.....	.....
Amaranth, Tp.	3	5,000	9,000	.....	.....
Ameliasburg, Tp.	12	8,000	1,200	43	.....
Amherst Island, Tp.	.....	.....	700	.....	.....
Amherstburg, Tn.	.....	.....	.....	.....	50,000
Ancaster, Tp.	2	2,500	1,000	.....	.....
Anderdon, Tp.	.....	.....	925	.....	.....
Anson and Hindon, Tps.	5	1,000	50	.....	.....
Armour, Tp.	20	4,000	1,092	20	.....
Arran, Tp.	1	1,500	5,941	52	.....
Arkona, V.	.....	.....	200	50	.....
Arnprior, Tn.	15	10,000	3,100	460	115,000
Artemesia, Tp.	5	8,000	2,798	108	.....
Arthur, Tp.	6	2,000	2,000	.....	.....
Arthur, V.	3	3,000	800	50	.....
Ashfield, Tp.	15	12,000	2,910	18	.....
Assiginack, Tp.	2	10,000	1,914	9	.....
Athens, V.	2	15,000	938	.....	.....
Athol, Tp.	5	5,150	2,500	.....	.....
Atwood, Tp.	4	2,800	700	.....	.....
Augusta, Tp.	6	1,700	5,000	.....	.....
Aurora, Tn.	6	12,000	4,000	500	30,000
Aylmer, Tn.	35	75,000	10,000	600	160,000
Ayr, V.	2	2,000	746	.....	.....
Bagot and Blythfield, Tps.	5	7,000	2,000	50	.....
Bancroft, V.	3	2,500	500	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings. erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No	$	$	$	$
Bangor, Wicklow & McClure, Tps.	.....	.....	353	108	.....
Barrie, Tn.	45	75,000	13,259	21,465	205,475
Barrie, Tp.	.....	.....	50	.....	.....
Barton, Tp.	50	13,525	42,261	506	.....
Bastard and Burgess, Tps.	2	4,500	3,000	.....	.....
Bath, V.	1	400	128	.....	120
Bathurst, Tp.	11	8,000	610	20	.....
Bayfield, V.	6	10,000	612	.....	.....
Bayham, Tp.	3	1,700	4,000	.....	.....
Beamsville, V.	10	8,000	100	25	20,000
Beaverton, V.	3	9,500	547	.....	.....
Bedford, Tp.	6	5,000	1,200	.....	.....
Beeton, V.	3	2,500	1,500	.....	19,500
Belle River, V.	.....	.....	800	100	.....
Belleville, C.	40	125,000	21,000	.....	283,000
Belmont and Methuen, Tps.	.....	.....	730	.....	.....
Berlin, Tn.	121	189,000	31,446	8,013	656,548
Bertie, Tp.	20	13,260	7,465	.....	.....
Beverly, Tp.	20	30,000	2,971	.....	.....
Bexley, Tp.	1	400	1,100	.....	.....
Biddulph, Tp.	19	8,475	4,000	36	.....
Billings, Tp.	2	2,000	1,622	.....	.....
Binbrook, Tp.	15	10,000	2,798	.....	.....
Blandford, Tp.	18	7,400	3,321	383	.....
Blanshard, Tp.	7	4,500	3,000	.....	.....
Blenheim, Tn.	5	12,500	1,593	.....	12,000
Blenheim, Tp.	12	15,000	5,323	.....	.....
Blezard, Tp.	6	3,500	2,100	.....	.....
Blind River, Tn.	9	20,000	4,000	.....	.....
Bloomfield, V.	2	2,000	7,000	.....	.....
Blyth, V.	6	13,000	1,000	50	.....
Bobcaygeon, V.	8	9,500	867	.....	25,000
Bolton, V.	4	6,000	.....	.....	.....
Bonfield, Tn.	3	2,250	625	.....	.....
Bosanquet, Tp.	16	13,300	5,247	.....	.....
Bothwell, Tn.	5	5,000	971	100	10,500
Bowmanville, Tn.	7	30,000	2,700	.....	.....
Bracebridge, Tn.	6	17,000	3,500	.....	110,000
Bradford, V.	2	8,000	2,127	.....	.....
Brampton, Tn.	20	40,000	8,000	52,000	100,000
Brant, Tp.	.....	.....	4,666	.....	.....
Brantford, C.	308	439,335	146,061	75,765	474,817
Bridgeburg, V.	25	58,000	5,340	.....	49,787
Brighton, Tp.	5	4,000	2,395	75	.....
Brighton, V.	3	5,000	3,000	200	.....
Brock, Tp.	18	25,000	9,050	258	.....
Brockville, Tn.	13	16,000	9,500	275	441,000
Bromley, Tp.	.....	.....	990	.....	.....
Brooke, Tp.	5	5,000	5,000	28	.....
Brougham, Tp.	1	2,500	300	.....	.....
Bruce, Tp.	16	8,500	2,739	106	.....
Bruce Mines, Tn.	2	3,500	430	.....	.....
Brudenell and Lynedoch, Tps.	.....	.....	145	.....	.....
Brussels, V.	2	9,500	.....	.....	.....
Bucke, Tp.	40	20,000	1,000	.....	.....
Burford, Tp.	75	50,000	6,000	.....	.....
Burgess N., Tp.	.....	.....	1,200	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Burleigh and Anstruther, Tps.	10	4,000	324	.....	.....
Burk's Falls, V.	4	12,000	1,142	.....	37,000
Burlington, V.	10	12,000	3,500	.....	50,000
Burpee, Tp.	.....	.....	400	.....	.....
Cache Bay, Tn.	3	2,800	233	35	.....
Caistor, Tp.	20	10,000	2,000	.....	.....
Caledon, Tp.	20	15,000	2,500	.....	.....
Caledonia, Tp.	4	4,000	500	.....	.....
Caledonia, V.	7	16,000	800	75	.....
Calvin, Tp.	6	6,000	.....	.....	.....
Cambridge, Tp.	.....	.....	600	.....	.....
Camden E., Tp.	5	5,000	4,722	.....	.....
Cameron, Tp.	.....	.....	600	.....	.....
Campbellford, Tn.	.....	.....	.....	.....	240,000
Canborough, Tp.	8	9,000	10,050	.....	.....
Cannington, V.	3	5,000	1,000	.....	.....
Caradoc, Tp.	10	11,000	5,000	.....	.....
Carden, Tp.	3	3,000	222	.....	.....
Cardiff, Tp.	1	1,500	169	.....	.....
Cardinal, V.	5	4,000	245	100	.....
Cardwell, Tp.	3	1,500	175	.....	.....
Carleton Place, Tn.	3	6,000	2,500	.....	.....
Carling, Tp.	2	4,000	357	.....	.....
Carlow, Tp.	5	5,500	700	150	.....
Carnarvon, Tp.	.....	.....	1,880	.....	.....
Carrick, Tp.	20	28,000	1,000	50	.....
Cartwright, Tp.	4	4,300	1,100	69	.....
Casey, Tp.	9	2,100	.....	.....	.....
Cassimir, Jennings and Appleby, Tps.	3	1,100	27	.....	.....
Casselman, V.	3	1,500	677	28	.....
Cavan, Tp.	5	4,700	13,446	175	.....
Cayuga, V.	2	.....	.....	.....	.....
Cayuga N., Tp.	7	6,200	1,000	.....	.....
Cayuga S., Tp.	2	3,000	400	.....	.....
Chamberlain, Tp.	20	4,000	13	.....	.....
Chapleau, Tp.	5	5,000	582	17	32,000
Chapman, Tp.	6	10,000	400	.....	.....
Chapple, Tp.	10	2,000	3,500	30	.....
Charlottenburgh, Tp.	9	4,000	12,337	25	.....
Charlotteville, Tp.	6	4,000	1,600	150	.....
Chatham, Tp.	.....	.....	.....	.....	.....
Chatham, C.	50	112,000	4,233	1,009	220,000
Chatsworth, V.	2	600	210	10	.....
Chesley, Tn.	20	20,100	5,000	3,500	38,000
Chesterville, V.	5	25,000	1,750	800	.....
Chippawa, V.	3	53,000	400	.....	1,000
Christie, Tp.	.....	.....	1,000	.....	.....
Clarence, Tp.	11	20,000	3,290	206	.....
Clarendon and Miller, Tps.	5	2,000	1,400	.....	.....
Clarke, Tp.	8	8,000	3,443	56	.....
Clifford, V.	3	6,000	.....	15	3,000
Clinton, Tn.	2	3,500	1,200	.....	54,000
Cobalt, Tn.	230	250,000	30,000	30,000	75,000
Cobden, V.	1	500	200	.....	.....
Cobourg, Tn.	25	150,000	5,504	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Cockburn Isl., Tp.	.....	.....	550	.....	.....
Colborne, Tp.	5	6,000	2,000	.....	.....
Colborne, V.	3	4,922	1,827	77	439
Colchester N., Tp.	10	8,000	15,000	.....	.....
Colchester S., Tp.	.....	.....	2,300	.....	.....
Coldwater, V.	3	8,200	1,000	.....	.....
Coleman, Tp.	.....	1,000,000	34,699	223	.....
Collingwood, Tn.	59	78,175	5,148	56,000	112,338
Collingwood, Tp.	11	7,700	3,518	.....	.....
Copper Cliff, Tn.	1	5,000	567	270	.....
Cornwall, Tn.	7	25,500	6,290	1,370	139,740
Cornwall, Tp.	20	30,000	10,000	700	.....
Courtwright, V.	.....	.....	864	.....	.....
Cramahe, Tp.	.....	.....	2,400	45	.....
Creemore, V.	5	7,000	650	.....	22,000
Crosby N., Tp.	3	7,000	563	.....	.....
Crosby S., Tp.	.....	.....	1,756	.....	.....
Culross, Tp.	7	10,400	2,027	47	.....
Cumberland, Tp.	9	6,500	4,000	.....	.....
Dalhousie & N. Sherbrooke, Tps.	5	5,500	800	.....	.....
Dalton, Tp.	.....	.....	175	.....	.....
Darling, Tp.	.....	.....	200	.....	.....
Dawn, Tp.	6	4,500	500	.....	.....
Day and Bright Add., Tps.	4	3,000	100	.....	.....
Delaware, Tp.	7	5,500	4,992	35	.....
Delhi, V.	2	700	1,780	.....	.....
Denbigh, Abinger and Ashley, Tps	10	2,200	146	.....	.....
Derby, Tp.	.....	.....	2,854	150	.....
Dereham, Tp.	.....	.....	8,500	.....	.....
Deseronto, Tn.	.....	.....	2,000	1,500	85,000
Dilke, Tp.	6	6,000	1,735	.....	.....
Dorchester S., Tp.	11	17,000	5,062	.....	.....
Douro, Tp.	4	7,000	1,700	.....	.....
Dover, Tp.	7	7,000	1,500	200	.....
Downie, Tp.	5	10,000	8,503	100	.....
Draper, Tp.	1	600	1,500	.....	.....
Drayton, V.	.....	.....	876	180	.....
Dresden, Tn.	3	19,500	1,909	223	13,000
Drummond, Tp.	.....	.....	1,580	31	.....
Drury, Denison and Graham, Tps.	8	5,000	2,408	166	226
Dryden, Tn.	23	60,000	3,000	100	.....
Dumfries, N., Tp.	10	6,000	2,824	190	.....
Dumfries S., Tp.	.....	.....	3,942	110	.....
Dummer, Tp.	.....	.....	1,062	72	.....
Dundalk, V.	5	8,000	1,000	.....	8,000
Dundas, Tn.	12	35,000	4,679	1,279	58,981
Dungannon, Tp.	3	2,300	678	.....	.....
Dunn, Tp.	4	4,000	200	9	.....
Dunnville, Tn.	20	40,000	1,210	118	31,000
Durham, Tn.	6	14,000	1,000	.....	.....
Dutton, V.	4	6,000	400	150	.....
Dymond, Tp.	6	3,000	4,989	.....	.....
Dysart, etc., Tp.	18	9,000	7,000	.....	.....
Easthope N., Tp.	15	3,000	18,000	.....	.....
Easthope S., Tp.	18	20,000	2,500	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Eastnor, Tp.	5	9,600	860	.....	.....
Eastview, V.	50	15,000	1,200	.....	.....
Eganville, V.	3	9,200	2,090	635	.....
Egremont, Tp.	9	10,000	2,086	.....	.....
Ekfrid, Tp.	18	4,500	5,432	.....	.....
Elderslie, Tp.	8	10,500	1,780	29	.....
Eldon, Tp.	10	11,100	3,028	.....	.....
Elizabethtown, Tp.	.....	.....	5,384	.....	.....
Ellice, Tp.	25	16,875	2,779	.....	.....
Elma, Tp.	14	15,000	14,000	.....	.....
Elmira, V.	19	28,010	2,146	.....	28,000
Elmsley N., Tp.	24	4,000	309	20	.....
Elmsley S., Tp.	5	2,000	1,383	.....	.....
Elora, V.	2	9,000	350	.....	.....
Embro, V.	2	3,000	400	.....	.....
Emily, Tp.	9	8,000	2,120	.....	.....
Emo, Tp.	.....	.....	3,845	.....	.....
Enniskillen, Tp.	.....	.....	7,000	56	.....
Eramosa, Tp.	20	20,000	600	90	.....
Erin, Tp.	.....	.....	5,597	35	.....
Erin, V.	.....	.....	1,200	.....	.....
Ernestown, Tp.	.....	.....	2,489	.....	.....
Escott, Front	5	4,800	629	.....	.....
Esquesing, Tp.	10	20,000	8,172	.....	.....
Essa, Tp.	4	5,400	1,000	125	.....
Essex, Tn.	6	12,500	600	.....	33,000
Etobicoke, Tp.	120	120,000	25,500	.....	.....
Euphemia, Tp.	13	10,950	3,004	.....	.....
Euphrasia, Tp.	10	5,000	2,414	.....	.....
Evanturel, Tp.	8	3,000	2,750	.....	.....
Exeter, V.	4	5,300	8,300	300	22,000
Faraday, Tp.	.....	.....	641	.....	.....
Fenelon, Tp.	.....	.....	4,147	.....	.....
Fenelon Falls, V.	4	6,000	800	.....	50,000
Fergus, V.	4	8,000	2,225	.....	.....
Ferris, Tp.	.....	.....	1,030	.....	.....
Finch, Tp.	25	30,000	2,000	.....	.....
Finch, V.	.....	.....	300	.....	.....
Fitzroy, Tp.	16	8,000	2,500	.....	.....
Flamboro' E., Tp.	27	34,800	3,248	.....	.....
Flamboro' W., Tp.	8	10,000	1,000	140	.....
Flos, Tp.	8	11,500	800	.....	.....
Foley, Tp.	1	500	495	.....	.....
Forest, Tn.	3	3,400	400	900	.....
Fort Erie, V.	10	20,000	6,000	.....	3,700
Fort Frances, Tn.	5	10,000	2,500	15,000	110,000
Fort William, C.	729	2,970,365	100,321	212,695	1,255,824
Fredericksburg N., Tp.	2	1,500	.....	.....	.....
Fredericksburg S., Tp.	2	3,000	1,862	.....	.....
Fullarton, Tp.	.....	.....	4,633	.....	.....
Gainsborough, Tp.	10	15,000	750	.....	.....
Galt, Tn.	70	100,000	13,500	15,000	204,189
Gananoque, Tn.	15	31,550	.....	200	160,000
Garafraxa E., Tp.	.....	.....	3,000	34	.....
Garafraxa W., Tp.	6	12,000	5,189	48	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Garden Island, V.	.....	.....	450	.....	.....
Georgina, Tp.	7	7,000	1,600	.....	.....
Georgetown, V.	7	12,000	4,651	.....	40,000
Glamorgan, Tp.	2	500	60	.....	.....
Glanford, Tp.	.....	.....	1,311	60	.....
Glenelg, Tp.	9	6,000	2,900	.....	.....
Gloucester, Tp.	.....	.....	5,000	.....	.....
Goderich, Tn.	13	16,500	3,414	3,089	127,493
Goderich, Tp.	5	5,000	3,000	.....	.....
Gordon, Tp.	3	3,000	1,450	.....	.....
Gore Bay, Tn.	6	14,000	600	.....	.....
Gosfield N., Tp.	29	12,500	17,500	69	8,000
Gosfield S., Tp.	10	15,000	4,013	.....	.....
Goulburn, Tp.	6	8,200	1,600	.....	.....
Gower N., Tp.	4	5,300	2,535	.....	.....
Gower S., Tp.	.....	.....	541	15	.....
Grand Valley, Tp.	3	6,000	.....	.....	.....
Grantham, Tp.	10	7,000	1,911	15	.....
Grattan, Tp.	4	1,000	296	115	.....
Gravenhurst, Tn.	2	3,000	.....	.....	80,000
Greenock, Tp.	.....	.....	3,957	.....	.....
Grey, Tp.	4	4,000	3,000	.....	.....
Griffith and Matawatchan, Tps.	.....	.....	44	.....	.....
Grimsby, V.	44	76,000	4,000	.....	50,000
Grimsby S., Tp.	3	2,500	1,185	.....	.....
Guelph, C.	77	127,625	93,090	20,995	829,560
Guelph, Tp.	.....	.....	5,294	.....	.....
Gwillimbury E., Tp.	13	11,000	3,577	164	.....
Gwillimbury N., Tp.	20	17,000	1,187	.....	.....
Gwillimbury W., Tp.	.....	.....	1,450	.....	.....
Hagar, Tp.	2	1,200	2,045	.....	.....
Hagerman, Tp.	3	1,000	785	.....	.....
Hagersville, V.	10	19,000	.....	.....	.....
Haileybury, Tn.	130	300,000	13,357	30,405	65,000
Haldimand, Tp.	30	25,000	3,310	103	.....
Hallam, Tp.	2	1,100	497	.....	.....
Hallowell, Tp.	.....	.....	1,413	.....	.....
Hamilton, C.	730	1,547,425	127,925	65,795	2,528,306
Hamilton, Tp.	8	10,000	5,472	380	.....
Hanmer, Tp.	8	3,000	1,000	250	.....
Hanover, Tn.	11	21,700	3,565	300	31,000
Harley, Tp.	10	2,000	3,000	.....	.....
Harriston, Tn.	1	1,500	700	.....	.....
Harvey, Tp.	2	2,000	1,550	.....	.....
Harwich, Tp.	10	10,000	12,000	179	.....
Hastings, V.	2	3,000	1,500	.....	.....
Havelock, V.	6	16,700	1,193	.....	.....
Hawkesbury, Tn.	3	24,000	.....	.....	110,000
Hawkesbury E., Tp.	15	8,000	2,500	.....	.....
Hawkesbury W., Tp.	18	40,000	2,500	.....	.....
Hay, Tp.	6	10,000	3,000	.....	.....
Head, Maria and Clara, Tps.	.....	.....	25	.....	.....
Hensall, V.	2	6,000	800	1,560	.....
Hepworth, V.	.....	.....	217	.....	.....
Hespeler, Tn.	15	60,000	16,500	.....	15,000
Hibbert, Tp.	.....	.....	715	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Hillier, Tp.	4	4,000	478	.....	.....
Hilton, Tp.	3	1,000	1,100	.....	.....
Himsworth N., Tp.	2	4,500	1,010	.....	.....
Himsworth S., Tp.	5	4,000	497	24	.....
Hinchinbrooke, Tp.	6	4,000	2,500	.....	.....
Holland Landing, V.	.....	.....	300	.....	.....
Hope, Tp.	14	10,500	900	.....	.....
Houghton, Tp.	6	8,500	2,530	.....	.....
Howard, Tp.	4	1,500	4,000	200	.....
Howe Island, Tp.	2	1,200	.....	.....	.....
Howick, Tp.	.....	.....	7,729	78	.....
Howland, Tp.	.....	.....	150	.....	.....
Hudson, Tp.	7	6,500	28,000	.....	.....
Hullett, Tp.	2	3,000	5,400	.....	.....
Humberstone, Tp.	21	70,000	2,356	101	.....
Humphrey, Tp.	7	5,000	.....	.....	.....
Hungerford, Tp.	20	35,000	2,000	.....	.....
Huntingdon, Tp.	6	5,000	355	.....	.....
Huntley, Tp.	6	7,150	2,205	.....	.....
Huntsville, Tn.	9	6,000	32,000	3,000	59,727
Huron, Tp.	6	12,000	3,700	66	.....
Ignace, Tp.	.....	.....	371	.....	.....
Ingersoll, Tn.	25	80,000	6,000	.....	.....
Innisfil, Tp.	.....	.....	3,490	.....	.....
Iroquois, V.	.....	.....	100	.....	40,000
James, Tp.	200	200,000	5,000	2,000	.....
Jaffrey and Melick, Tps.	12	4,000	1,500	.....	.....
Jocelyn, Tp.	4	2,000	200	.....	.....
Johnson and Tarbutt, Tps.	9	2,300	2,700	.....	.....
Joly, Tp.	.....	.....	300	.....	.....
Kaladar, Anglesea and Effingham, Tps.	.....	.....	210	.....	.....
Kearney, Tp.	3	2,800	250	.....	.....
Kennebec, Tp.	6	3,000	300	.....	.....
Keewatin, Tn.	9	24,000	3,000	.....	.....
Kemptville, V.	3	10,000	1,200	.....	.....
Kenora, Tn.	11	30,000	9,334	7,872	633,775
Keppel, Tp.	50	40,000	3,000	.....	.....
Kerns, Tp.	3	1,500	2,300	.....	.....
Kincardine, Tn.	12	14,400	2,584	112	67,579
Kincardine, Tp.	.....	.....	1,950	.....	.....
King, Tp.	6	10,000	6,000	500	1,600
Kingston, C.	155	452,695	24,700	4,150	614,437
Kingston, Tp.	.....	.....	2,000	800	.....
Kingsville, Tn.	3	4,000	2,200	200	30,000
Kinloss, Tp.	.....	.....	1,769	.....	.....
Kitley, Tp.	.....	.....	3,876	.....	.....
Korah, Tp.	4	2,400	6,500	.....	.....
Laird, Tp.	2	2,000	293	.....	.....
Lakefield, V.	7	8,500	1,176	100	.....
Lanark, Tp.	.....	.....	1,504	.....	.....
Lanark, V.	1	3,500	130	87	.....
Lancaster, Tp.	10	7,500	2,591	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Lancaster, V.	1	3,000	1,059	500	.....
Latchford, Tn.	5	6,200	209	.....	300
Lavallee, Tp.	5	3,385	5,000	.....	.....
Lavant, Tp.	2	500	107	.....	.....
Leamington, Tn.	12	25,000	3,500	80	50,000
Leeds and Lansdowne Front, Tps.	15	20,000	7,496	15	.....
Leeds and Lansdowne Rear, Tps.	90	95,000	3,268	.....	.....
Limerick, Tp.	1	1,000	1,217	.....	.....
Lindsay, Tn.	25	55,000	11,000	2,000	110,000
Listowel, Tn.	.....	.....	.....	.....	40,000
Little Current, Tn.	10	7,000	200	100	.....
Lobo, Tp.	8	8,850	7,000	218	.....
Lochiel, Tp.	12	9,600	8,000	.....	.....
Logan, Tp.	3	8,500	13,342	55	.....
London, C.	684	850,134	71,134	29,280	934,319
London, Tp.	.....	100,000	11,177	104	.....
Longueuil, Tp.	10	7,000	200	.....	.....
L'Orignal, V.	4	3,000	.....	500	.....
Lucan, V.	7	17,000	300	.....	4,300
Lucknow, V.	2	11,000	.....	.....	10,000
Luther E., Tp.	10	15,000	2,000	.....	.....
Luther W., Tp.	10	10,000	1,344	189	.....
McDougall, Tp.	6	4,200	524	.....	.....
McGillivray, Tp.	9	9,000	2,133	.....	.....
McIrvine, Tp.	9	2,776	.....	.....	.....
McKellar, Tp.	5	1,500	321	.....	.....
McKillop, Tp.	3	4,400	3,982	.....	.....
McKim, Tp.	1	1,200	537	.....	.....
McLean and Ridout, Tps.	2	1,000	500	.....	.....
McMurrich, Tp.	3	1,700	400	.....	.....
McNab, Tp.	2	1,000	10,000	.....	.....
Macaulay, Tp.	.....	.....	200	.....	.....
Macdonald and Meredith, Tps.	.....	.....	1,647	.....	.....
Machar, Tp.	.....	.....	.....	.....	.....
Machin, Tp.	1	2,000	1,500	.....	.....
Madoc, Tp.	12	12,500	4,000	450	15,000
Madoc, V.	2	19,000	760	.....	.....
Maidstone, Tp.	47	47,000	7,202	129	.....
Malahide, Tp.	6	1,000	5,000	.....	.....
Malden, Tp.	13	9,450	3,226	.....	.....
Manvers, Tp.	6	5,800	2,727	.....	.....
Mara, Tp.	4	1,500	5,000	.....	.....
March, Tp.	.....	.....	.....	.....	.....
Mariposa, Tp.	6	6,000	7,510	191	.....
Markdale, V.	.....	.....	.....	.....	30,000
Markham, Tp.	.....	.....	6,000	550	.....
Markham, V.	7	22,000	500	.....	13,000
Marlborough, Tp.	.....	.....	275	.....	.....
Marmora, V.	4	12,000	400	.....	.....
Marmora and Lake, Tps.	11	40,000	478	.....	.....
Martland, Tp.	8	1,200	2,600	35	.....
Maryborough, Tp.	2	2,400	2,756	.....	.....
Marysburgh N., Tp.	5	8,000	900	.....	.....
Marysburgh S., Tp.	20	10,000	1,500	.....	.....
Massey, Tn.	11	8,400	446	.....	19,000
Matchedash, Tp.	3	1,200	200	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Matilda, Tp.	4	6,000	2,813	.....	.....
Mattawa, Tn.	.....	.....	446	.....	.....
Mattawan, Tp.	.....	.....	18	.....	.....
Maxville, V.	4	7,800	.....	100	.....
Mayo, Tp.	.....	.....	300	.....	.....
Medonte, Tp.	35	20,000	5,000	.....	.....
Medora and Wood, Tps.	4	40,000	3,218	46	.....
Melancthon, Tp.	10	10,000	1,905	21	.....
Merrickville, V.	6	7,800	2,508	.....	.....
Merritton, V.	.....	.....	1,065	688	97,088
Mersea, Tp.	16	15,000	12,176	.....	.....
Metcalfe, Tp.	3	3,800	4,750	45	.....
Middleton, Tp.	.....	.....	3,056	.....	.....
Midland, Tn.	70	85,000	10,000	500	135,200
Millbrook, V.	.....	.....	537	48	.....
Milton, Tn.	13	26,000	1,000	500	40,000
Millverton, V.	6	25,000	4,000	.....	.....
Minden, Tp.	.....	.....	716	.....	.....
Minto, Tp.	9	11,900	706	.....	.....
Mitchell, Tn.	.....	.....	1,700	.....	29,000
Monaghan N., Tp.	8	8,000	1,200	.....	.....
Monaghan S., Tp.	.....	.....	3,000	.....	.....
Monck, Tp.	.....	.....	1,908	.....	.....
Monmouth, Tp.	6	3,000	103	23	.....
Mono, Tp.	7	10,000	5,071	.....	.....
Monteagle and Herschel, Tps.	.....	.....	600	.....	.....
Moore, Tp.	25	12,500	7,500	.....	.....
Morley, Tp.	8	5,000	5,000	.....	.....
Mornington, Tp.	12	13,500	4,000	.....	.....
Morris, Tp.	5	10,000	5,817	.....	.....
Morrisburg, V.	1	6,000	3,750	.....	60,000
Mosa, Tp.	7	3,000	3,500	20	.....
Moulton, Tp.	5	2,000	283	.....	.....
Mount Forest, Tn.	1	2,000	1,000	300	45,000
Murray, Tp.	5	2,500	1,971	572	.....
Muskoka, Tp.	3	6,400	665	.....	.....
Nairn and Lorne, Tps.	3	3,000	400	.....	.....
Napanee, Tn.	1	700	4,000	.....	45,000
Nassagaweya, Tp.	12	15,000	3,500	.....	.....
Neebing, Tp.	10	2,600	10,234	.....	.....
Neelon and Garson, Tps.	.....	.....	1,800	.....	.....
Nelson, Tp.	10	1,800	3,500	.....	.....
Nepean, Tp.	100	100,000	8,118	.....	.....
Nepigon, Tp.	14	30,000	500	1,000	.....
Neustadt, V.	4	5,000	1,481	.....	.....
New Hamburg, V.	6	18,000	2,000	.....	.....
New Liskeard, Tn.	5	20,000	7,500	8,000	60,000
Newboro', V.	6	3,000	150	.....	.....
Newburgh, V.	2	800	1,154	.....	.....
Newbury, V.	.....	.....	.....	.....	.....
Newcastle, V.	2	6,000	500	.....	.....
Newmarket, Tn.	30	40,000	14,000	137	51,000
Niagara, Tn.	3	10,000	1,400	100	58,000
Niagara, Tp.	4	13,800	4,378	.....	.....
Niagara Falls, C.	40	280,000	11,000	12,000	325,000
Nicholl, Tp.	.....	.....	1,000	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Nipissing, Tp.	1	200,000	300	.....	.....
Nissouri E., Tp.	27	12,000	4,190	175	.....
Nissouri W., Tp.	12	6,500	6,350	.....	.....
Normanby, Tp.	.....	.....	.....	.....	.....
North Bay, Tn.	100	200,000	24,748	4,823	109,925
Norwich, V.	2	3,000	1,200	.....	.....
Norwich N., Tp.	12	30,000	4,883	281	.....
Norwich S., Tp.	6	6,000	6,600	.....	.....
Norwood, V.	4	7,600	65	.....	.....
Nottawasaga, Tp.	1	800	4,804	77	.....
Oakland, Tp.	6	8,500	765	.....	.....
Oakley, Tp.	2	23,000	1,070	.....	.....
Oakville, Tn.	14	28,000	6,310	162	70,000
O'Connor, Tp.	18	6,000	1,400	.....	.....
Oil Springs, V.	.....	.....	502	.....	.....
Olden, Tp.	4	2,000	1,600	100	.....
Oliver, Tp.	1	6,000	3,659	30	.....
Omemee, V.	1	1,000	715	.....	.....
Oneida, Tp.	.....	.....	1,500	17	.....
Onondaga, Tp.	6	3,000	2,235	.....	.....
Ops, Tp.	10	16,000	4,234	53	.....
Orangeville, Tn.	.....	.....	.....	.....	55,000
Orford, Tp.	9	9,500	7,840	33	.....
Orillia, Tn.	100	200,000	5,000	50,000	440,000
Orillia, Tp.	10	10,000	4,538	.....	.....
Oro, Tp.	12	25,000	1,102	.....	.....
Osgoode, Tp.	15	38,000	3,000	.....	.....
Oshawa, Tn.	48	120,000	11,500	2,500	130,000
Osnabruck, Tp.	18	2,500	5,700	65	.....
Oso, Tp.	4	4,000	400	.....	.....
Osprey, Tp.	45	40,000	2,932	.....	.....
Otonabee, Tp.	4	8,000	4,067	20	.....
Ottawa, C.	683	4,527,590	345,749	107,900	2,580,000
Owen Sound, Tn.	74	300,000	17,128	4,549	430,331
Oxford, Tp.	5	5,000	1,500	.....	.....
Oxford E., Tp.	7	7,000	5,058	47	.....
Oxford N., Tp.	4	2,000	2,500	.....	.....
Oxford W., Tp.	12	6,600	2,650	.....	.....
Paipoonge, Tp.	6	3,000	4,300	.....	3,300
Paisley, V.	.....	.....	2,108	307	9,900
Pakenham, Tp.	4	9,000	1,400	.....	.....
Palmerston, Tn.	10	12,000	2,000	5,500	54,000
Palmerston, N. & S. Canonto, Tps.	1	400	400	.....	.....
Papineau, Tp.	.....	.....	63	.....	.....
Paris, Tn.	13	75,000	2,700	400	136,000
Parkhill, Tn.	3	19,000	474	188	.....
Parry Sound, Tn.	40	55,000	3,500	2,100	135,000
Peel, Tp.	19	17,700	5,150	.....	.....
Pelee, Tp.	10	10,000	750	.....	.....
Pelham, Tp.	6	12,000	4,000	.....	.....
Pembroke, Tn.	18	160,000	16,000	650	95,000
Pembroke, Tp.	3	2,600	260	.....	.....
Penetanguishene, Tn.	12	15,000	3,320	2,328	49,000
Percy, Tp.	6	10,000	1,500	.....	.....
Perry, Tp.	2	2,000	450	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Perth, Tn.	10	10,000	3,000	.....	13,000
Petawawa, Tp.	4	3,000	150	25	.....
Peterborough, C.	228	343,489	16,230	6,321	458,000
Petrolea, Tn.	.....	.....	23,500	.....	190,430
Pickering, Tp.	15	20,000	6,380	603	.....
Picton, Tn.	2	4,000	5,272	352	60,350
Pilkington, Tp.	3	5,500	2,356	.....	.....
Pittsburg, Tp.	8	9,000	3,876	.....	.....
Plantagenet N., Tp.	20	20,000	500	.....	.....
Plummer Addl., Tp.	6	2,000	600	.....	.....
Plympton, Tp.	7	9,500	6,302	.....	.....
Point Edward, V.	4	4,000	.....	.....	.....
Port Arthur, C.	173	744,810	52,615	29,800	972,700
Port Carling, V.	2	1,000	612	40	.....
Port Colborne, V.	5	10,000	2,000	.....	30,000
Port Dalhousie, V.	5	6,000	1,220	.....	.....
Port Dover, V.	6	7,000	2,984	.....	.....
Port Elgin, V.	5	15,000	.....	.....	40,000
Port Hope, Tn.	6	10,000	10,300	.....	115,000
Port Perry, V.	1	2,500	2,500	.....	23,000
Port Rowan, V.	4	3,000	459	.....	424
Port Stanley, V.	15	11,000	1,880	276	.....
Portland, Tp.	7	10,000	3,618	.....	.....
Portsmouth, V.	.....	.....	283	108	.....
Powassan, Tn.	12	25,000	1,000	500	.....
Prescott, Tn.	6	15,000	4,500	.....	90,000
Preston, Tn.	60	80,000	4,000	8,000	128,911
Prince, Tp.	.....	.....	1,400	.....	.....
Puslinch, Tp.	50	70,000	4,768	80	.....
Rainham, Tp.	15	10,000	900	.....	.....
Rainy River, Tp.	20	26,600	1,420	.....	.....
Raleigh, Tp.	25	25,000	3,000	75	.....
Rama, Tp.	5	6,000	3,100	.....	.....
Ramsey, Tp.	4	2,500	4,225	.....	.....
Ratter and Dunnett, Tps.	5	3,900	1,200	83	.....
Rawdon, Tp.	5	7,500	1,000	.....	.....
Rayside, Tp.	3	700	366	.....	.....
Reach, Tp.	.....	.....	1,425	40	.....
Renfrew, Tn.	8	15,000	8,000	4,000	100,000
Richmond, Tp.	6	1,000	1,500	25	.....
Richmond West, V.	3	1,125	560	.....	.....
Richmond Hill, V.	3	4,000	500	.....	.....
Ridgetown, Tn.	5	2,500	300	200	.....
Rochester, Tp.	4	3,500	5,468	105	8,219
Rockland, Tn.	10	15,000	2,177	.....	.....
Rodney, V.	2	3,000	552	.....	.....
Rolph, Buchanan & Wylie, Tps.	4	1,500	615	.....	.....
Romney, Tp.	4	10,000	1,997	128	.....
Ross, Tp.	10	8,000	.....	21	.....
Roxborough, Tp.	.....	.....	18,242	.....	.....
Russell, Tp.	20	25,000	5,000	.....	.....
Ryde, Tp.	3	2,500	800	.....	.....
Ryerson, Tp.	3	2,500	565	.....	.....
St. Catharines, C.	73	95,000	67,000	14,000	390,000
St. Joseph, Tp.	25	13,410	1,750	.....	.....

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
St. Mary's, Tn.	8	16,000	6,828	.....	85,000
St. Thomas, C.	152	261,600	13,000	4,000	600,000
Salter, May and Harrow, Tps.	15	8,000	200	10	.....
Saltfleet, Tp.	18	25,000	3,000	80	.....
Sandfield, Tp.	.....	.....	.....	.....	.....
Sandwich, Tn.	17	15,000	2,000	50,000	20,900
Sandwich E., Tp.	16	29,000	11,300	500	.....
Sandwich S., Tp.	20	12,000	4,000	.....	.....
Sandwich W., Tp.	26	33,000	9,600	150	.....
Sarawak, Tp.	.....	.....	700	43	.....
Sarnia, Tn.	16	36,800	26,852	15,555	225,000
Sarnia, Tp.	12	20,000	5,000	.....	.....
Saugeen, Tp.	9	8,000	3,162	20	.....
Sault Ste. Marie, Tn.	75	150,000	22,668	1,082	.....
Schreiber, Tp.	31	24,650	450	.....	.....
Scott, Tp.	9	12,000	2,500	119	.....
Scugog, Tp.	1	1,000	400	.....	.....
Seaforth, Tn.	2	8,000	900	800	13,000
Sebastopol, Tp.	.....	.....	64	.....	.....
Seneca, Tp.	4	3,000	300	60	.....
Seymour, Tp.	.....	.....	3,952	.....	.....
Sheffield, Tp.	5	1,500	572	.....	.....
Shelburne, V.	3	6,000	1,500	.....	24,000
Sherburne, etc., Tp.	.....	.....	400	.....	.....
Sherbrooke, Tp.	1	95	55	.....	.....
Sherbrooke S., Tp.	.....	.....	500	.....	.....
Shuniah, Tp.	.....	.....	9,267	.....	.....
Sidney, Tp.	.....	.....	3,863	.....	.....
Simcoe, Tn.	21	65,000	1,400	300	75,835
Smith, Tp.	6	5,500	3,684	108	.....
Smith's Falls, Tn.	38	80,000	17,000	6,000	150,000
Snowdon, Tp.	6	1,500	245	.....	.....
Somerville, Tp.	.....	.....	.....	.....	.....
Sophiasburg, Tp.	5	3,300	1,237	.....	.....
South River, V.	5	10,000	.....	.....	.....
Southampton, Tn.	9	3,000	3,461	.....	33,870
Southwold, Tp.	3	4,000	8,753	81	.....
Springer, Tp.	10	1,500	3,000	.....	.....
Springfield, V.	3	8,000	719	.....	.....
Stafford, Tp.	5	7,000	800	.....	.....
Stanhope, Tp.	.....	.....	113	.....	.....
Stanley, Tp.	4	8,000	3,000	.....	.....
Stayner, Tn.	.....	.....	252	.....	24,000
Steelton, Tn.	20	16,000	7,904	1,168	33,000
Stephen, Tp.	3	1,500	8,000	.....	.....
Stephenson, Tp.	.....	.....	570	10	.....
Stirling, V.	5	19,500	415	.....	10,000
Stisted, Tp.	2	4,000	800	.....	.....
Storrington, Tp.	100	50,000	2,000	.....	.....
Stouffville, V.	3	8,500	1,235	.....	25,000
Stratford, C.	61	139,675	42,885	3,090	200,287
Strathroy, Tn.	6	31,500	3,000	600	60,000
Streetsville, V.	3	6,500	800	.....	28,000
Strong, Tp.	3	2,000	1,700	10	.....
Sturgeon Falls, Tn.	2	2,000	2,997	999	46,812
Sturgeon Point, V.	.....	.....	.....	129	.....
Sudbury, Tn.	87	185,000	7,947	1,430	142,052

MUNICIPAL STATISTICS.—*Continued.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Sullivan, Tp.	15	15,000	500	.....	.....
Sundridge, V.	3	700	200	.....	.....
Sunnidale, Tp.	20	5,000	1,600	.....	.....
Sutton, V.	5	5,000	1,006	16	.....
Sydenham, Tp	4	3,000	2,674	.....	.....
Tara, V.	1	1,800	.....	24	.....
Tarentorus, Tp.	15	6,600	2,766	14	.....
Tavistock, V.	8	12,000	1,500	.....	.....
Tay, Tp.	.....	.....	25,026	.....	.....
Tecumseth, Tp.	5	5,000	5,000	.....	.....
Teeswater, V.	4	7,500	300	.....	14,000
Tehkummah, Tp.	3	1,500	500	.....	.....
Thamesville, V.	2	10,000	500	.....	6,250
Thedford, V.	.....	.....	500	30	.....
Thessalon, Tn.	12	47,500	13,000	.....	36,510
Thessalon, Tp.	1	350	895	.....	.....
Thompson, Tp.	1	600	112	.....	.....
Thorah, Tp.	9	3,550	1,288	66	.....
Thornbury, Tn.	3	5,400	.....	.....	.....
Thorold, Tn.	7	5,000	1,000	3,500	140,000
Thorold, Tp.	5	3,000	5,200	.....	.....
Thurlow, Tp.	14	48,000	3,600	.....	.....
Tilbury, Tn.	6	10,500	.....	.....	16,176
Tilbury E., Tp.	11	12,000	1,500	50	.....
Tilbury N., Tp.	5	8,000	2,000	.....	.....
Tilbury, W., Tp.	30	20,000	7,500	225	.....
Tillsonburg, Tn.	10	25,000	5,000	.....	.....
Tiny, Tp.	16	15,000	2,395	.....	.....
Tiverton, V.	.....	.....	502	.....	.....
Torbolton, Tp.	.....	.....	421	.....	.....
Toronto, C.	7,184	18,139,247	1,850,104	301,810	7,040,000
Toronto, Tp.	25	35,700	10,000	190	.....
Toronto Gore, Tp.	7	9,000	3,000	170	.....
Toronto North, Tn.	100	150,000	11,964	200	105,000
Tossorontio, Tp.	3	5,000	500	.....	.....
Tottenham, V.	2	1,600	6,240	.....	6,000
Townsend, Tp.	20	25,000	5,225	200	.....
Trafalgar, Tp.	.....	.....	4,000	.....	.....
Trenton, Tn.	15	25,000	6,000	.....	.....
Tudor and Cashel, Tps.	.....	.....	2,287	.....	.....
Turnberry, Tp.	14	19,000	1,140	35	.....
Tweed, V.	6	10,700	.....	.....	.....
Usborne, Tp.	2	6,000	3,712	30	.....
Uxbridge, Tn.	.....	.....	1,376	230	15,000
Uxbridge, Tp.	12	15,000	1,000	.....	.....
Van Horne, Tp.	9	4,000	750	.....	.....
Vankleek Hill, Tn.	4	8,000	2,590	.....	.....
Vaughan, Tp.	50	50,000	11,560	.....	.....
Verulam, Tp.	5	2,800	3,300	.....	.....
Vespra, Tp.	25	12,500	1,357	17	.....
Vienna, V.	2	400	430	.....	.....
Wainfleet, Tp.	25	25,000	6,000	.....	.....
Walkerton, Tn.	3	5,000	.....	222	55,000
Walkerville, Tn.	30	52,360	18,000	10,636	.....
Wallace, Tp.	.....	.....	1,800	.....	.....
Wallaceburg, Tn.	36	208,950	1,100	100	.....

MUNICIPAL STATISTICS.—*Concluded.*

Cities, Towns, Villages and Townships.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	$
Walpole, Tp.	10	10,000	7,315	145	.....
Walsingham N., Tp.	5	7,000	4,275	.....	.....
Wardsville, V.	1	1,400	500	100	.....
Warwick, Tp.	.....	.....	2,500	.....	.....
Waterdown, V.	2	1,000	1,300	20	.....
Waterford, V.	11	30,000	621	275	.....
Waterloo, Tn.	35	65,000	13,800	8,000	110,000
Waterloo, Tp.	.....	.....	2,668	.....	.....
Waters, Tp.	.....	.....	1,470	.....	.....
Watford, V.	.....	.....	200	.....	.....
Watt, Tp.	8	4,500	817	.....	.....
Wawanosh E., Tp.	6	3,900	2,304	.....	.....
Wawanosh W., Tp.	.....	.....	1,500	.....	.....
Webbwood, Tn.	4	16,000	2,000	250	.....
Welland, Tn.	100	200,000	15,746	38,208	150,000
Wellesley, Tp.	10	8,000	4,056	662	.....
Wellington, V.	6	6,000	100	100	.....
West Lorne, V.	6	7,000	712	670	.....
Westmeath, Tp.	.....	.....	2,477	5	.....
Westminster, Tp.	.....	.....	7,238	365	.....
Weston, V.	12	25,000	2,000	.....	11,500
Westport, V.	.....	.....	1,600	.....	.....
Whitby, Tn.	2	6,000	2,400	.....	81,640
Whitby, Tp.	15	10,600	1,500	.....	.....
Whitby E., Tp.	4	6,000	3,200	.....	.....
Whitchurch, Tp.	5	6,800	2,283	.....	.....
Wiarton, Tn.	5	5,000	493	.....	50,000
Widdifield, Tp.	125	72,500	2,871	.....	.....
Wilberforce, and N. Algona, Tps	.....	.....	.....	.....	.....
Williams E., Tp.	.....	.....	2,100	.....	.....
Williams W., Tp.	1	700	3,092	.....	.....
Williamsburg, Tp.	4	6,500	7,100	15	.....
Willoughby, Tp.	4	4,000	7,000	.....	.....
Wilmot, Tp.	14	26,000	9,000	300	.....
Winchester, Tp.	15	15,000	5,009	.....	.....
Winchester, V.	1	2,600	12,250	.....	.....
Windham, Tp.	.....	.....	9,512	.....	.....
Windsor, C.	141	423,885	43,970	9,069	340,000
Wingham, Tn.	4	10,000	2,036	.....	670,000
Wolfe Island, Tp.	4	5,000	350	.....	20,000
Wolford, Tp.	8	4,000	5,500	.....	.....
Wollaston, Tp.	.....	.....	1,230	.....	.....
Woodbridge, V.	2	3,000	500	.....	.....
Woodhouse, Tp.	17	21,000	2,500	50	.....
Woodstock, C.	20	75,000	10,500	2,884	287,042
Woodville, V.	.....	.....	75	.....	1,200
Woolwich, Tp.	14	8,000	2,500	.....	.....
Worthington and Blue, Tps.	4	1,600	780	.....	.....
Wroxeter, V.	2	3,500	204	.....	1,600
Wyoming, V.	5	5,000	.....	.....	.....
Yarmouth, Tp.	17	27,000	21,000	2,000	.....
Yonge Front, Tp.	4	1,200	300	.....	.....
Yonge and Escott Rear, Tps.	2	3,000	881	.....	.....
York, Tp.	250	150,000	39,401	2,384	.....
Zone, Tp.	.....	.....	1,200	18	.....
Zorra E., Tp.	38	28,200	10,000	150	.....
Zorra W., Tp.	7	2,000	6,000	.....	.....
Total	19,102	43,355,358	5,495,941	1,417,781	31,367,502

SUMMARY.

Cities.	No. of new buildings erected during 1909.	Aggregate cost new buildings.	Spent on permanent improvements.	Spent on sanitation, including sewers.	Cost or value public utilities owned and operated.
	No.	$	$	$	I$
Belleville	40	125,000	21,000	.....	283,000
Brantford	308	439,335	146,061	75,765	474,817
Chatham	50	112,000	4,233	1,009	220,000
Fort William	729	2,970,365	100,321	212,695	1,255,824
Guelph	77	127,625	93,090	20,995	829,560
Hamilton	730	1,547,425	127,925	65,795	2,528,306
Kingston	155	452,695	24,700	4,150	614,437
London	684	850,134	71,134	29,280	934,319
Niagara Falls	40	280,000	11,000	12,000	325,000
Ottawa	683	4,527,590	345,749	107,900	2,580,000
Peterborough	228	343,489	16,230	6,321	458,000
Port Arthur	173	744,810	52,615	29,800	972,700
St. Catharines	75	95,000	67,000	14,000	390,000
St. Thomas	152	261,600	13,000	4,000	600,000
Stratford	61	139,675	42,885	3,090	200,287
Toronto	7,184	18,139,247	1,850,104	301,810	7,040,000
Windsor	141	423,885	43,970	9,069	340,000
Woodstock	20	75,000	10,500	2,884	287,042
18 Cities	11,530	31,654,875	3,041,517	900,363	20,333,295
120 Towns	2,493	5,153,485	695,382	492,435	9,975,652
135 Villages	519	1,018,147	161,110	10,297	985,002
496 Townships	4,560	5,528,851	1,597,932	14,486	73,547
769 Grand Totals	19,102	43,355,358	5,495,941	1,417,781	31,367,508

PUBLIC UTILITIES CLASSIFIED.

In the final column of the preceding tables the capital invested in public utilities owned and operated by the municipalities has been recorded. In the following table they are classified according to their nature. This classification could not be carried out absolutely as some of the municipalities do not keep separate accounts for connected operations, but in these cases the fact is stated with a reference to the columns containing the combined figures. In two or three cases, where clerks could not or would not report the present figures, those of the preceding year have been used.

Municipalities.	(1) Water Works.	(2) Electric Lighting.	(3) Gas Works.	(4) Street Railways.	(5) Power Plant.	(6) Telephone System.	(7) Miscellaneous
	$	$	$	$	$	$	$
Acton, V.	.....	8,200	.....	.....	.....	.....	.....
Albemarle, Tp.	200	.....	.....	.....	.....	.....	.....
Alexandria, Tn.	47,500	with (1)	.....	.....	.....	.....	.....
Alliston, Tn.	19,000	.....	.....	.....	.....	.....	.....
Almonte, Tn.	.....	38,000	.....	.....	.....	.....	.....
Amherstburg, Tn.	40,000	10,000	.....	.....	.....	.....	.....
Arnprior, Tn.	115,000	.....	.....	.....	.....	.....	.....
Aurora, Tn.	30,000	.....	.....	.....	.....	.....	.....
Aylmer, Tn.	100,000	60,000	.....	.....	.....	.....	.....
Barrie, Tn.	122,485	82,990	.....	.....	with (2)	.....	.....
Bath, V.	.....	120	.....	.....	.....	.....	.....
Beamsville, V.	20,000	.....	.....	.....	.....	.....	.....
Beeton, V.	14,500	5,000	.....	.....	.....	.....	.....
Belleville, C.	193,000	.....	90,000	.....	.....	.....	.....
Berlin, Tn.	206,579	340,141	with (2)	109,828	.....	.....	.....
Blenheim, Tn.	.....	12,000	.....	.....	.....	.....	.....
Bobcaygeon, V.	.....	25,000	.....	.....	with (2)	.....	.....
Bothwell, Tn.	4,500	6,000	.....	.....	.....	.....	.....
Bracebridge, Tn.	110,000	with (1)	.....	.....	with (1)	.....	.....
Brampton, Tn.	100,000	.....	.....	.....	.....	.....	.....
Brantford, C.	474,817	.....	.....	.....	.....	.....	.....
Bridgeburg, V.	49,787	.....	.....	.....	.....	.....	.....
Brockville, Tn.	266,000	175,000	.....	.....	.....	.....	.....
Burk's Falls, V.	37,000	.....	.....	.....	.....	.....	.....
Burlington, V.	50,000	.....	.....	.....	.....	.....	.....
Campbellford, Tn.	40,000	200,000	.....	.....	.....	.....	.....
Chapleau, Tp.	32,000	.....	.....	.....	.....	.....	.....
Chatham, C.	200,000	20,000	.....	.....	.....	.....	.....
Chesley, Tn.	38,000	.....	.....	.....	.....	.....	.....
Chippawa, V.	1,000	.....	.....	.....	.....	.....	.....
Clifford, V.	.....	.....	3,000	.....	.....	.....	.....
Clinton, Tn.	54,000	.....	.....	.....	.....	.....	.....
Cobalt, Tn.	75,000	.....	.....	.....	.....	.....	.....
Colborne, V.	439	.....	.....	.....	.....	.....	.....
Collingwood, Tn.	72,974	33,364	.....	.....	6,000	.....	.....
Cornwall, Tn.	139,740	.....	.....	.....	.....	.....	.....
Creemore, V.	22,000	.....	.....	.....	.....	.....	.....
Deseronto, Tn.	35,000	.....	50,000	.....	.....	.....	.....
Dresden, Tn.	.....	13,000	.....	.....	.....	.....	.....

PUBLIC UTILITIES CLASSIFIED.—*Continued.*

Municipalities.	(1) Water Works.	(2) Electric Lighting.	(3) Gas Works.	(4) Street Railways.	(5) Power Plant.	(6) Telephone System.	(7) Miscellaneous.
	$	$	$	$	$	$	$
Drury, Tp.	.....	226	.....	.....	.....	.....	.....
Dundalk, V.	.....	8,000	.....	.....	.....	.....	.....
Dundas, Tn.	58,981	.....	.....	.....	.....	.....	.....
Dunnville, Tn.	31,000	.....	.....	.....	.....	.....	.....
Elmira, V.	28,000	.....	.....	.....	.....	.....	.....
Essex, Tn.	33,000	.....	.....	.....	.....	.....	.....
Exeter, V.	22,000	.....	.....	.....	.....	.....	.....
Fenelon Falls, V.	.....	50,000	.....	.....	.....	.....	.....
Fort Erie, V.	.....	3,700	.....	.....	.....	.....	.....
Fort Frances, Tn.	100,000	10,000	.....	.....	.....	.....	.....
Fort William, C.	701,839	170,000	.....	244,500	.....	139,485	.....
Galt, Tn.	204,189	.....	.....	.....	.....	.....	.....
Gananoque, Tn.	160,000	.....	.....	.....	.....	.....	.....
Georgetown, V.	40,000	.....	.....	.....	.....	.....	.....
Goderich, Tn.	127,493	with (1)	.....	.....	.....	.....	.....
Gosfield N., Tp.	.....	.....	.....	.....	.....	8,000	.....
Gravenhurst, Tn.	20,000	60,000	.....	.....	with (2)	.....	.....
Grimsby, V.	50,000	.....	.....	.....	.....	.....	.....
Guelph, C.	323,965	383,145	with (2)	122,450	with 2)	.....	.....
Haileybury, Tn.	65,000	.....	.....	.....	.....	.....	.....
Hamilton, C.	2,528,306	.....	.....	.....	.....	.....	.....
Hanover, Tn.	31,000	.....	.....	.....	.....	.....	.....
Hawkesbury, Tn.	110,000	.....	.....	.....	.....	.....	.....
Hespeler, Tn.	.....	15,000	.....	.....	.....	.....	.....
Huntsville, Tn.	59,727	with (1)	.....	.....	.....	.....	.....
Iroquois, V.	40,000	.....	.....	.....	.....	.....	.....
Kenora, Tn.	199,824	44,578	.....	.....	372,533	16,840	.....
Kincardine, Tn.	46,799	20,780	.....	.....	.....	.....	.....
King, Tp.	.....	1,600	.....	.....	.....	.....	.....
Kingston, C.	300,000	147,119	167,318	.....	.....	.....	.....
Kingsville, Tn.	30,000	.....	.....	.....	.....	.....	.....
Latchford, Tn.	300	.....	.....	.....	.....	.....	.....
Leamington, Tn.	25,000	.....	25,000	.....	.....	.....	.....
Lindsay, Tn.	110,000	.....	.....	.....	.....	.....	.....
Listowel, Tn.	27,500	12,500	.....	.....	.....	.....	.....
London, C.	934,319	.....	.....	.....	.....	.....	.....
Lucan, V.	.....	4,300	.....	.....	.....	.....	.....
Lucknow, V.	10,000	.....	.....	.....	.....	.....	.....
Madoc, V.	.....	15,000	.....	.....	.....	.....	.....
Markdale, V.	30,000	.....	.....	.....	.....	.....	.....
Markham, V.	13,000	with (1)	.....	.....	.....	.....	.....
Massey, Tn.	19,000	.....	.....	.....	.....	.....	.....
Merritton, V.	86,180	10,908	.....	.....	.....	.....	.....
Midland, Tn.	87,500	47,700	.....	.....	.....	.....	.....
Milton, Tn.	25,000	15,000	.....	.....	.....	.....	.....
Mitchell, Tn.	30,000	with (1)	.....	.....	.....	.....	.....
Morrisburg, V.	30,000	30,000	.....	.....	.....	.....	.....
Mount Forest, Tn.	45,000	with (1)	.....	.....	.....	.....	.....
Napanee, Tn.	45,000	.....	.....	.....	.....	.....	.....
New Liskeard, Tn.	60,000	.....	.....	.....	.....	.....	.....

PUBLIC UTILITIES CLASSIFIED.—*Continued.*

Municipalities.	(1) Water Works.	(2) Electric Lighting.	(3) Gas Works.	(4) Street Railways.	(5) Power Plant.	(6) Telephone System.	(7) Miscellaneous.
	$	$	$	$	$	$	$
Newmarket, Tn.	29,000	22,000	.....	.....	.....	.....	.....
Niagara, Tn.	36,000	22,000	.....	.....	.....	.....	.....
Niagara Falls, C.	200,000	125,000	.....	.....	.....	.....	.....
North Bay, Tn.	109,925	.....	.....	.....	.....	.....	.....
Oakville, Tn.	45,000	25,000	.....	.....	.....	.....	.....
Orangeville, Tn.	55.000	.....	.....	.....	.....	.....	.....
Orillia, Tn.	115,000	325,000	.....	.....	with (2)	.....	.....
Oshawa, Tn.	130,000	.....	.....	.....	.....	.....	.....
Ottawa, C.	2,250,000	330,000	.....	.....	.....	.....	.....
Owen Sound, Tn.	225,900	114,959	89,472	.....	with (2)	.....	.....
Paipoonge, Tp.	.....	.....	.....	.....	.....	3,300	.....
Paisley, V.	9,900	.....	.....	.....	.....	.....	.....
Palmerston, Tn.	40,000	14,000	.....	.....	.....	.....	.....
Paris, Tn.	82,000	54,000	.....	.....	.....	.....	.....
Parry Sound, Tn.	60,000	75,000	.....	.....	.....	.....	.....
Pembroke, Tn.	95,000	.....	.....	.....	.....	.....	.....
Penetanguishene, Tn.	49,000	.....	.....	.....	.....	.....	.....
Perth, Tn.	.....	13,000	.....	.....	.....	.....	.....
Peterborough, C.	458,000	.....	.....	.....	.....	.....	.....
Petrolea, Tn.	190,430	.....	.....	.....	.....	.....	.....
Picton, Tn.	60,350	with (1)	.....	.....	.....	.....	.....
Port Arthur, C.	400,000	71,000	.....	400,200	294,000	101,500	.....
Port Colborne, V.	30,000	.....	.....	.....	.....	.....	.....
Port Elgin, V.	40,000	.....	.....	.....	.....	.....	.....
Port Hope, Tn.	115,000	.....	.....	.....	.....	.....	.....
Port Perry, V.	23,000	with (1)	.....	.....	.....	.....	.....
Port Rowan, V.	.....	.....	424	.....	.....	.....	.....
Prescott, Tn.	65,000	25,000	.....	.....	.....	.....	.....
Preston, Tn.	85,340	43,571	.....	.....	.....	.....	.....
Renfrew, Tn.	100,000	.....	.....	.....	.....	.....	.....
Rochester, Tp.	.....	.....	.....	.....	.....	8,219	.....
St. Catharines, C.	340,000	.....	50,000	.....	.....	.....	.....
St. Mary's, Tn.	65,000	20,000	.....	.....	.....	.....	.....
St. Thomas, C.	275,000	250,000	with (2)	75,000	.....	.....	.....
Sandwich, Tn.	20,900	.....	.....	.....	.....	.....	.....
Sarnia, Tn.	225,000	.....	.....	.....	.....	.....	.....
Seaforth, Tn.	13,000	.....	.....	.....	.....	.....	.....
Shelburne, V.	24,000	.....	.....	.....	.....	.....	.....
Simcoe, Tn.	75,835	.....	.....	.....	.....	.....	.....
Smith's Falls, Tn.	150,000	.....	.....	.....	.....	.....	.....
Southampton, Tn.	33,870	.....	.....	.....	.....	.....	.....
Staynor, Tn.	24,000	.....	.....	.....	.....	.....	.....
Steelton, Tn.	33,000	.....	.....	.....	.....	.....	.....
Stirling, V.	.....	10,000	.....	.....	.....	.....	.....
Stouffville, V.	25,000	.....	.....	.....	.....	.....	.....
Stratford, C.	200,287	.....	.....	.....	.....	.....	.....
Strathroy, Tn.	60,000	with (1)	.....	.....	.....	.....	.....
Streetsville, V.	.....	28,000	.....	.....	.....	.....	.....
Sturgeon Falls, Tn.	46,812	.....	.....	.....	.....	.....	.....
Sudbury, Tn.	142,052	with (1)	.....	.....	.....	.....	.....
Teeswater, V.	14,000	.....	.....	.....	.....	.....	.....
Thamesville, V.	.....	6,250	.....	.....	.....	.....	.....

PUBLIC UTILITIES CLASSIFIED.—*Concluded.*

Municipalities.	(1) Water Works.	(2) Electric Lighting.	(3) Gas Works.	(4) Street Railways.	(5) Power Plant.	(6) Telephone System.	(7) Miscellaneous.
	$	$	$	$	$	$	$
Thessalon, Tn.	25,280	11,230	.....	.....	.....	.....	.....
Thorold, Tn.	90,000	50,000	.....	.....	.....	.....	.....
Tilbury, Tn.	16,176	.....	.....	.....	.....	.....	.....
Toronto, C.	7,000,000	40,000	.....	.....	.....	.....	.....
Toronto N. Tn.	105,000	with (1)	.....	.....	.....	.....	.....
Tottenham, V.	.....	6,000	.....	.....	.....	.....	.....
Uxbridge, Tn.	15,000	.....	.....	.....	.....	.....	.....
Walkerton, Tn.	55,000	.....	.....	.....	.....	.....	.....
Waterloo, Tn.	80,000	.....	30,000	.....	.....	.....	.....
Welland, Tn.	150,000	.....	.....	.....	.....	.....	.....
Weston, V.	.....	11,500	.....	.....	.....	.....	.....
Whitby, Tn.	55,449	26,191	.....	.....	.....	.....	.....
Wiarton, Tn.	50,000	.....	.....	.....	.....	.....	.....
Windsor, C.	300,000	40,000	.....	.....	.....	.....	.....
Wingham, Tn.	370,000	300,000	.....	.....	.....	.....	.....
Wolfe Island, Tp.	.....	.....	.....	.....	.....	.....	20,000
Woodstock, C.	214,925	72,117	.....	.....	with 2)	.....	.....
Woodville, V.	.....	1,200	.....	.....	.....	.....	.....
Wroxeter, V.	.....	1,600	.....	.....	.....	.....	.....
Totals	25,022,444	4,211,989	505,214	657,978	672,533	277,344	20,000
Grand Total	31,367,502						

FREE EMPLOYMENT BUREAUS.

The four free employment offices, operated under this Bureau in Hamilton, London, Ottawa and Berlin, continued to work successfully. An office at Brantford was added in April, 1910, and has made good progress. The following table gives the applications for work, and for help wanted and the situations filled, month by month, for the respective localities. The second table shows the applications, etc., by trades.

Applications for 1910.

Location.	Applications for work.		Help wanted.		Situations filled.	
	Male.	Female.	Male.	Female.	Male.	Female.
Berlin:—						
January	10	4	10	22	10	4
February	17	1	17	44	17	1
March	23	3	23	.....	23	.....
April	20	.....	38	15	20	.....
May	27	5	46	5	27	5
June	8	.....	41	.....	8	.....
July	16	.....	26	.....	15	.....
August	40	2	65	2	40	2
September	6	.....	21	16	6	.....
October	10	.....	42	.....	10	.....
November	12	.....	32	.....	12	.....
December	40	3	35	5	35	3
Totals.	229	18	396	109	223	15
Hamilton:—						
January	14	2	10	1	10	.....
February	19	.....	29	.....	18	.....
March	23	1	38	.....	22	.....
April	33	.....	68	1	33	.....
May	32	.....	86	.....	32	.....
June	26	.....	28	.....	25	.....
July	33	.....	43	.....	29	.....
August	17	.....	15	.....	14	.....
September	26	.....	24	.....	23	.....
October	31	.....	34	.....	30	.....
November	44	.....	44	.....	44	.....
December	18	.....	11	.....	11	.....
Totals.	316	3	430	2	291	.....
London:—						
January	23	.....	15	.....	14	.....
February	19	.....	11	1	10	.....
March	19	.....	14	.....	13	.....
April	16	.....	12	.....	12	.....
May	19	.....	17	.....	16	.....
June	22	.....	15	.....	16	.....
July	16	.....	12	.....	10	.....
August	8	.....	6	.....	6	.....
September	9	.....	9	1	7	.....
October	14	.....	21	.....	11	.....
November	16	.....	12	.....	12	.....
December	10	.....	3	.....	3	.....
Totals.	191	.....	147	2	130	.....
Ottawa:—						
January	28	11	7	9	7	8
February	26	8	10	6	10	4

Applications for 1910.—*Continued.*

Location.	Applications for work.		Help wanted.		Situations filled.	
	Male.	Female.	Male.	Female.	Male.	Female.
Ottawa.—*Continued.*						
March	27	.....	14	.....	14	.....
April	10	4	3	7	3	4
May	19	1	9	8	9	1
June	19	4	10	4	10	3
July	9	3	7	3	6	2
August	12	4	9	6	9	4
September	15	.....	26	5	11	.....
October	22	7	11	8	11	8
November	21	8	12	9	10	6
December	32	.....	1	3	1	.....
Totals.	240	50	119	68	101	40
Brantford:—						
April	18	1	56	20	13	1
May	29	1	51	4	18	.....
June	32	2	73	2	23	2
July	16	1	60	1	14	1
August	29	2	18	1	17	1
September	17	.....	65	.....	13	.....
October	13	1	28	1	10	.....
November	19	3	32	1	10	1
December	20	1	16	1	11	1
Totals	193	12	399	31	129	7
Grand Totals	1,169	83	1,491	212	874	62

Applications by Trades for year 1910.

Trade or calling.	Applications for work.		Help wanted.		Situations filled.	
	Male.	Female.	Male.	Female.	Male.	Female.
Agent	1					
Bakers	3		2		2	
Barbers	3		1		1	
Blacksmiths	11		5		3	
Book Agents	1		1		1	
Bookkeepers	6					
Brassworkers	1		1		1	
Bricklayers	6		3		3	
Brickmakers			2			
Bushmen	3		3		3	
Buttonworkers	1		1		1	
Cabinetmakers	3		7		2	
Canvassers	1		2		1	
Carpenters	32		37		19	
Clerks	66	2	41		40	
Coachmen and Drivers	20		22		13	
Coopers	1					
Domestics	4	76	3	99	1	59
Electrical Workers	1		10		1	
Engineers	1		1			
Errand Boys	2					
Factory Hands				21		
Farm Hands	56		130	3	49	
Firemen	2		2		2	
Fitters	1					
Foremen	2		2		2	
Gardeners	12		9		8	
Grocers	1					
Grooms	2		1		1	
Inspectors	2		2		2	
Janitors	1		1		1	
Labourers	849		1,120		677	
Machinists	9		3		3	
Machine Operators		1		4		1
Millwrights	1					
Moulders	2		1		1	
Painters	15		8		8	
Plasterers	2		1		1	
Plumbers	1		1			
Porters	6		12		6	
Pressmen	1					
Rubber Shoe Workers	3		6	5	3	
Saddlers			1			
Salesmen and Women	1			2		
Sewing Operators				13		
Shirtwaist Operators				45		
Shoemakers	9	1	31	20	5	2
Shippers	1					
Stablemen	1					
Stenographers	2	2	2		2	
Stokers	1					
Stonecutters	2					
Tailors	5		3		3	
Tinsmiths	1		4		1	
Typewriters		1				
Upholsterers	1		1		1	
Waiters	1		2		1	
Warehousemen	3		2		2	
Watchmen	2		2		1	
Wheelwrights	1					
Woodworkers	3		2		2	
Totals	1,169	83	1,491	212	874	62

LABOUR ORGANIZATIONS.

There was a slight falling off in the returns from the labour organizations, there being only 335 as compared with 358 last year, a decrease of 23, though there remains an increase of 15, 64 and 178 over the three preceding years. There still remains in some quarters the unwillingness to give information as to the unions, which is strange, as in the United States, the United Kingdom, and the rest of Europe, labour organizations are glad to have opportunities of showing their full strength. It is a pity also that retiring secretaries do not make better arrangements for their official correspondence reaching their successors.

RETURNS IN DETAIL OF LABOUR ORGANIZATIONS.

Allandale.

Name,—Brotherhood of Locomotive Firemen and Enginemen. Organized 1890; total membership, 125; average earnings per week, $12; average earnings per hour, 19c.; number of working hours per week, irregular; wages paid monthly; average number of days idle per member during year, irregular; general cause of idleness, dullness in freight movements; total number (union and non-union) employed at calling in locality, 150; no difference in wages of those employed at calling in locality between members and non-members of organization; death benefits, $500 to $3,000; insurance is rated; have classes for instruction on air-brakes; body incorporated and registered. President, George St. Louis, Allandale; Corresponding Secretary, H. Hodsden, Allandale; meets 2nd Sunday at 2.30 p.m., and 4th Wednesday at 7.30 p.m., each month.

Alliston.

Name,—International Brotherhood of Maintenance of Way Employees (Muskoka, C.P.R.), No. 217. Organized May 29th, 1907; total membership, 46; average earnings per week, $9; average earnings per hour, 15c.; number of working hours first 5 days, 50; number on Saturday, 10; wages paid monthly; no idle days; total number (union and non-union) employed at calling in locality, 51; no difference in hours of labour or wages of those employed at calling in locality between members and non-members of organization; death benefits, insurance; no special work for members, such as reading room or evening classes; body incorporated and registered. President, Charles Trinkwar, Coldwater P.O.; Corresponding Secretary, J. W. Bone, Palgrave P.O.; meets 3rd Saturday each month.

Amherstburg.

Name,—International Surface Rock and Drill Boat Workers, Local No. 504. Organized June 10th, 1903; total members, 230; average earnings per week, $21; average earnings per hour, 30c.; number of working hours first 5 days, 50; number on Saturday, 10; wages paid fortnightly; average number of days idle per member during year, 90; general cause of idleness, ice and cold weather; all at calling in locality are members of organization; body incorporated and registered. President, John Dickey, 864 Glenwood Avenue, Buffalo, N.Y.; Corresponding Secretary, Lemuel A. Parker, Amherstburg; meets Monday at 2.30.

Aurora.

Name,—American Federation of Musicians, No. 335. Organized September 8, 1902; total membership, male, 29; female, 4. President, Fred. D. Waite, Moseley St., Aurora; Corresponding Secretary, J. C. Querrie, Aurora; meets 1st Monday in month.

Belleville.

Name,—Bricklayers', Masons' and Plasterers' International Union of Ontario, No. 30. Organized October, 1905; total membership, 26; average earnings per week, $14.50; average earnings per hour, 36½c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 120; general cause of idleness, slackness of work during winter months; total number (union and non-union) employed at trade in locality, 44; difference in wages or hours of labour of those engaged at trade in locality between members and non-members of organization; minimum wage for union men is 36½c. per hour; non-union men work as low as 25c. per hour; no reading room or evening classes; body not incorporated or registered. President, Thomas Waymark, Herkimer Avenue, Belleville; Corresponding Secretary, Albert Aylnice, 55 Catherine Street, Belleville; meets 1st and 3rd Monday in month.

Name,—Brotherhood Locomotive Firemen and Enginemen (Engineers), No. 66. Organized 1877; total membership, 76; average earnings per week, $17.50; wages paid monthly; general cause of idleness, falling off in traffic; total number (union and non-union) employed at calling in locality, 70 firemen; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, sickness, 50c. per day; in case of death, insurance policies from $500 to $3,000; no special work for members, such as reading room, evening classes, etc.; body incorporated and registered. President, Alfred Calcutt, Belleville Station; Corresponding Secretary, Robert Milne, Belleville Station; days of meeting, 2nd and 4th Tuesdays in month.

Name,—Brotherhood of Locomotive Engineers, Division No. 189. Organized December 23, 1875; total membership, 48; average earnings per week, $25; average earnings per hour, pro rata; number of working hours per week, 60; wages paid monthly; average number of days idle per member during year, 15; general cause of idleness, depression of business; total number (union and non-union) employed at calling in locality, 54; no difference in wages and hours of labour at calling in locality between members and non-members of organization; cash benefits, in case of death, $750 to $4,500 insurance; body not incorporated or registered. President, T. Marshall, Belleville Station P.O.; Corresponding Secretary, H. Lavoie, Box 34, Station P.O.; meets 1st and 3rd Sundays.

Name,—Journeymen Plumbers' United Association, No. 411. Organized November 27, 1907; total members, 7; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; total number (union and non-union) employed at trade in locality, about five; cash benefits, sickness, $5 per week; death, $100. President, D. Marsh, Belleville; Corresponding Secretary, W. Cronk, 411 Front Street; meets Fridays.

Name,—International Brotherhood of Painters and Decorators, No. 86. Organized 1907; total membership, 30; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first five days, 45; number on Saturday, 8; wages paid weekly; average number of days idle per member during year, 60; no difference in wages and hours of labour of those engaged at trade in

locality between members and non-members of organization; body not incorporated or registered. President, Bruce Loucks, Boswell Street, Belleville; Corresponding Secretary, C. E. Cochrane, Pinnicle St., Belleville; meets 1st and 3rd Mondays in month.

Blenheim.

Name,—International Maintenance of Way Employees, No. 602. Organized October 4, 1907; total membership, 39; average earnings per week, $9 to $12.69; average earnings per hour, 15c. and 21c.; number of working hours per week, 60; wages paid monthly; no idle days, but when extra men are laid off in the fall; total number (union and non-union) employed at calling in locality, 57; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; no benefits of any kind unless insured in some other organization; body incorporated and registered. President, Arthur Mansell, Blenheim West; Corresponding Secretary, Alex. Martin. Blenheim; meets last Saturday in month.

Brantford.

Name,—United Brotherhood of Carpenters and Joiners of America, No. 498. Organized February 21, 1900; total membership, 16; average earnings per week, $14; average earnings per hour, 30c.; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 60; general cause of idleness, winter weather and dull times; total number (union and non-union) employed at trade in locality, 200; differences in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; in wages 51c. per day in favour of members; cash benefits, death $400; body incorporated and registered. President, W. D. Gardiner, 160 Murray Street, Brantford; Corresponding Secretary, Joseph Swift, 292 Park Avenue; meets 2nd and 4th Tuesdays in month.

Name,—Amalgamated Society of Carpenters and Joiners, No. 783. Organized May 4, 1906; total membership, 18; average earnings per week, $12; number of working hours first five days, 50; number on Saturday, 5 in summer and 9 in winter; wages paid weekly; average number of days idle per member during year, 30 to 50; general cause of idleness, unfavourable weather and slackness in trade; total number (union and non-union) employed at trade in locality, about 150; difference in wages and hours of labour of those engaged at trade in locality, 2½c. per hour less; hours same; cash benefits; lack of work, $2.50 per week for twelve weeks; sickness, $3 per week for twenty-six weeks, and $1.50 per week for twelve weeks succeeding; superannuation, $2 and $1.75; $500 total disability, accident insurance; $250 and $125 for partial disability; death, $60 and $25; body registered. President, W. S. Jago, St. Paul's Avenue, Brantford; Corresponding Secretary, J. C. Coles, 150 Wellington St., Brantford; meets alternate Mondays in Union Hall.

Name,—Journeymen Tailors' Union of America, No. 117. Organized 1883; total membership, male 33; female 27; average earnings per week, male $10.50; female $5, average earnings per hour, male 22c.; female 15c.; number of working hours per week, 60; wages paid weekly. Average number of days idle per member during year, 60; general cause of idleness, slack trade; total number (union and non-union) employed at trade in locality, male 36; female 33; no difference in

wages or hours of labour of those engaged in trade in locality between members and non-members of organization; cash benefits, sickness, $5 per week; death $100; body affiliated with American Federation of Labour. President, Wm. Kenzie, Terrace Hill St., Brantford; Corresponding Secretary, R. J. Campbell, Box 252, Brantford; meets 4th Tuesday in month.

Name,—Operative Plasterers' International Union, No. 164. Organized March 23rd, 1900; total membership, 9; average earnings per week, $12; average earnings per hour, 35c.; number of working hours first five days, 45; number on Saturday, 9; average number of days idle per member during year, 150; general cause of idleness, winter months; total number (union and non-union) employed at trade in locality, 20; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; no minimum scale for non-members; cash benefits, death, $50. President Thos. Thompson, Box 115, Brantford; Corresponding Secretary, Alf. D. Bennett, P.O., Brantford; meets alternate Thursdays.

Name,—Journeymen Barbers' International Union, No. 298. Organized May 26, 1901; total membership, 26; average earnings per week, $12; average earnings per hour, 19c.; number of working hours first five days, 50; number on Saturday, 13½; wages paid weekly; total number (union and non-union) employed at trade in locality, 41; cash benefits, sickness, $5 per week; death, $75 up to $500; body incorporated and registered. President, Jas. Price, 5 George St., Brantford; Corresponding Secretary, Thos Linscott, 248 Colborne St.; meets last Monday in month.

Name,—Cigarmakers' International Union, No. 59. Organized March 15, 1886; total membership, 13; average earnings per week, $10; average earnings per hour, 20c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, 44; general cause of idleness, slackness in trade; total number (union and non-union) employed at trade in locality, male, 20; female, 100; difference in wages or hours of labour of those engaged in trade in locality between members and non-members of organization, non-members work two hours longer per day and $2 less per thousand; cash benefits, sickness, $5 per week; death, $50 to $550; out of work $3 per week; body incorporated and registered. President, A. Grandall, 29 Brow-ham Street, Brantford; Corresponding Secretary, Frank Mather, 75 Greenwich Street, Brantford; meets 3rd Tuesday in month.

Name,—International Moulders' Union, No. 29. Organized 1852; total membership, 150; average earnings per week, $14.75; average earnings per hour, 25c.; number of working hours first five days, 50; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, 25; general cause of idleness, depression in trade; total number (union and non-union) employed at trade in locality, union 150; non-union, 100; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union shops are better paid by 25 per cent. President, John Sloan, Jr., Brantford; Corresponding Secretary, C. J. Crowley, 471 Colborne St., Brantford; meets alternate Mondays in month.

Name,—Operative Plasterers' International Association, No. 164. Organized March 23, 1900; total membership, 9; average earnings per week, $12; average earnings per hour, 35c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, half the year; general cause of idleness, winter months and late starting in spring; total number (union and non-union) employed at trade in locality, 18;

difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, all work same number of hours, but non-members work for less money; cash benefits, in case of death, $50. President, Thos. Thompson, Brantford; Corresponding Secretary, A. D. Bennett, P.O., Brantford; meets alternate Thursdays.

Name,—Bartenders' International League, No. 182. Organized May 17, 1899; total membership, 25; average earnings per week, $12; number of working hours first five days, 45; number on Saturday, 12; wages paid weekly, fortnightly and monthly; total number (union and non-union) employed at calling in locality, 19 union and 3 non-union; cash benefits, sickness, $3 per week for 13 weeks; death, $50; union registered. President, Alfred Smith, Kerby House, Brantford; Corresponding Secretary, Thos. McCuster, The Bodega Tavern, Brantford; meets last Sunday in month.

Name,—Bricklayers' and Masons' International Union, No. 9, Ontario. Organized March 23, 1899; total membership, 85; average earnings per week, $19.80; average earnings per hour, 45c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; total number (union and non-union) employed at trade in locality, 90; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union men receive $3.60 for 8-hour day; non-union men receive $2.50 to $3.50 per 10-hour day; cash benefits, $50 to $200; body registered. President, T. T. Cooper, 10 Lawrence St., Brantford; Corresponding Secretary, B. E. Pearcey, 74½ Erie Avenue, Brantford; meets alternate Thursdays in month.

Name,—Journeymen Plumbers, Gas Fitters, Steam Fitters and Steam Fitters' Helpers' International Union. Organized October, 1899; total membership, 11; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 24; general cause of idleness, slack times; total number (union and non-union) employed at trade in locality, 15; cash benefits, sickness, $5 per week; death, $100. President, J. R. Heatley, 50 Balfour St., Brantford; Corresponding Secretary, Jas. W. Crombер, 51 Church St., Brantford; meets 2nd and 4th Wednesday in month.

Name,—International Painters', Paperhangers' etc., Union, No. 313. Organized March 31, 1901; total membership, 12; average earnings per week, $10.80; average earnings per hour, 20c. to 22c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; cash benefits; death, $200; body incorporated and registered. President, Thos. Hill, 9 Marlborough St., Brantford; Corresponding Secretary, C. H. Jones, 93 Arthur St., Brantford; meets 2nd Monday in month.

Name,—United Brotherhood of Carpenters' and Joiners'. Organized Feb. 21, 1900; total membership, 25; average earnings per week, $16.50; average earnings per hour 30c.; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; total number (union and non-union) employed at trade in locality, 75; non-members 5 more hours, and $2 or $3 less than union men; death benefits, $200; no other cash benefits; no special work for members; incorporated and registered. President, W. D. Gardiner, 160 Murray Street, Brantford; Corresponding Secretary, Jos. Swift, 292 Park Ave., Brantford; meets 2nd and 4th Tuesdays.

Berlin.

Name,—Journeymen Tailors' International Union, No. 264. Organized, 1900; total membership, male, 9; female, 6; average earnings per week, male, $12; female, $9; average earnings per hour, male, 20c.; female, 15c.; number of working hours first five days, 50; number on Saturday, 10; wages paid fortnightly; average number of days idle per member during year, 30; general cause of idleness, slack season; all are members of union at trade in locality; cash benefits, sickness, $5 per week. President, Otto A. Stanch, 83 St. George St., Berlin; Corresponding Secretary, Anna Wuerst, 104 College St., Berlin; meets 1st Tuesday in month.

Name,—Canadian Association of Stationary Engineers, No. 9. Organized April 18, 1903; total membership, 38; average earnings per week, $12; average earnings per hour, 20c. to 25c.; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; total number (union and non-union) employed at trade in locality, 86; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; have teaching on Stationary Engineering at every meeting; body incorporated and registered. President, Peter Uttley, Berlin; Corresponding Secretary, C. Emmrick, 186 Victoria St., Berlin; meets 2nd and 4th Wednesdays.

Name,—Cigarmakers' International Union, No. 422. Organized July 24, 1899; total membership, 24; average earnings per week, $9; average earnings per hour, 25c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, 40; general cause of idleness, damp weather and slackness in trade, caused by local option in many places; total number (union and non-union) employed at trade in locality, male, 35; female, 5; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; union men work 8 hours and non-union men 10 hours per day; union men receive $7 per thousand; others receive $4 and $5 per thousand; cash benefits, lack of employment, $3 per week; sickness, $5 per week; in case of death, $50 to $550; strike benefit, $5 per week; loan to travel in search of work, $20. President, Leo. Sobisch, Waterloo; Corresponding Secretary Steve Wetheuser, 150 King St., Berlin; meets 2nd Wednesday in month at Labour Hall.

Name,—Federal Labour Union, No. 17. Organized April 21, 1901; total membership, 165; average earnings per week, $11; average earnings per hour, 19c.; number of working hours first five days, 50; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, about 150; general cause of idleness, inclement weather during the winter months; total number (union and non-union) at calling in locality, 200; difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; non-members average $9 per week; cash benefits, sickness, monetary grants; out of work grants by union; have social evening for entertainments. President, Fred Ackerknecht, Berlin; Corresponding Secretary, Otto H. Zimmer, 17 Cameron St., North; meets 1st and 3rd Thursday in month.

Name,—Musicians' Protective Association; total membership, male, 80; female, 2. President, E. C. Schultz, 18 Brubacher St., Berlin; Corresponding Secretary, G. A. Albrecht, 149 Wellington St., Berlin; meets 1st Tuesday in month.

Name,—United Brotherhood of Carpenters and Joiners, No. 553. Organized April 14, 1900; total membership, 34; average earnings per week, $12 to $15;

average earnings per hour, 20c. to 27½c.; number of working hours first five days, in winter, 45; and in summer, 50; number on Saturday, 9; average number of days idle per member during year, about 60; general cause of idleness, slackness in trade during winter months; total number (union and non-union) employed at trade in locality, 200; difference in wages and hours of labour of those engeged at trade in locality between members and non-members of organization, union men work 9 hours per day; others work 10 hours; cash benefits, in case of death, $200. President, R. F. Gofton, 177 Joseph St., Berlin; Corresponding Secretary, Peter Jacobs, 106 Wellington St., Berlin; meets 1st and 3rd Fridays in month.

Name,—Boot and Shoe Workers' Union, No. 206. Organized March 1st, 1900; total membership, 70; average earnings per week, male, $12; female, $6; average earnings per hour, male, 20c.; female, 10c.; number of working hours first five days, 50; number on Saturday, 9 hours for eight months and 5 hours for four months; wages paid fortnightly; average number of days idle per member during year, 10; general cause of idleness, holidays and lack of work; total number (union and non-union) employed at trade in locality, 175 men and 75 women; difference in wages and hours of labour of those engaged in trade in locality between members and non-members of organization, $1 to $2 per week in favour of members; cash benefits, sickness, $5 per week; death, $100. President, G. P. Blood, 155 Margaret Avenue, Berlin; Corresponding Secretary, P. J. Dammon, 21 Albert St., Berlin; meets 2nd and 4th Friday in month.

Name,—Upholsterers' International Union, No. 42. Organized February, 1908; total membership, 24; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first five days, 50; number on Saturday, 9; with 5 hours during the summer months; wages paid fortnightly; average number of days idle per member during year, 30; general cause of idleness, stock-taking and usual holidays; total number (union and non-union) employed at trade in locality, about 60; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization. President, A. R. Nichol, Waterloo; Corresponding Secretary, J. D. Wotherspoon, 86 Wilhelm St., Berlin; meets 1st and 3rd Mondays in month.

Name,—International Hodcarriers and Builders' Labourers' Union, No. 160. Organized 1905; total membership, 76; average earnings per week, $11.88 to $15.12; average earnings per hour, 22c. to 28c.; number of working hours first five days, 45; number on Saturdays, 9; wages paid fortnightly; average number of days idle per member during year, mostly all winter; general cause of idleness, no work; all are union members at calling in locality; they receive from 22c. to 28c.; registered with the International body. President, Wm. Benedick, Berlin; Corresponding Secretary, Geo. Hoffman, 58 Homewood Avenue, Berlin.

Name,—International Typographical Union, No. 366. Organized, November, 1909; total membership 15; average earnings per week, $10; average earnings per hour, 20c.; number of working hours per week, 54; wages paid some weekly, some fortnightly; total number (union and non-union) employed at trade in locality, male, 20; female, about 4; this does not include pressmen or assistant pressmen; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, up to June 30th, 1910, no difference; since July 1st, 1910, union men only work 48 hours per week; non-members work longer; cash benefits, superannuation, $4 per week; death, $75; International Typographical Union has correspondence classes for studying the art of printing, open to all its members. President, Fred. Pollokowski, 94 Wel-

lington Street, Berlin; Corresponding Secretary, Harry Delion, 62 Frederick Street, Berlin; meets second Monday in month.

Name,—Brewery Workers' (Twin-City) Union, No. 170. Organized Feb. 17, 1909; total membership, 80; average earnings per week, $12; average earnings per hour, 20c.; work 10 hours per day for first six months in year and nine hours per day afterward; number on Saturday, 9; wages paid fortnightly; no idle days during year; total number (union and non-union) employed at calling in locality, 90; no difference in wages and hours of labor of those engaged in locality between members and non-members of organization; body incorporated and registered. President, Jacob Seibel, 29 King Street W., Berlin; Corresponding Secretary, Menno Dahmer, Box 443, Waterloo; meets second and fourth Wednesday in month.

Name,—Bricklayers', Masons' and Plasterers' International Union, No. 12. Organized March, 1900; total membership, 91; average earnings per week, $21.60; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; general cause of idleness, winter weather; all are members of organization in locality. President, M. Asmussen, 188 Benton St., Corresponding Secretary, Arthur Plummer, 108 Weber St., E.; meets every Friday in month,

Bridgeburg.

Name,—Brotherhood of Railway Carmen, No. 10. Average earnings per week, $9.60; average earnings per hour, 16c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; average number of days idle per member during year, no days idle; total number (union and non-union) employed at calling in locality, 35 in G. T. R. and M. C. R. R. yards; M. C. R. R. is paying 17c. per hour and G. T. R. 16c. per hour; men are expecting a raise in wages; cash benefits, sickness, 50c. per day; death, insurance on the G. T. R.; superannuation after 65 years of age. Corresponding Secretary, A. Merryweather, Bridgeburg.

Brockville.

Name,—Bartenders' International League, No. 308. Organized 1902; total membership, 13; average earnings per week, $10.66; average earnings per hour, 16½c.; number of working hours first five days, 45; number on Saturday, 6; wages paid weekly; all working at calling in locality are members of League; cash benefits; death, $50; body incorporated and registered. President, Thos. Christopher, Revere House, King Street, Brockville; Corresponding Secretary, Albert Dowdall, Strathcona Hotel, King St., Brockville; meets Sunday.

Name,—Order of Railway Conductors, Div. No. 366. Organized February, 1894; total membership, 30; average earnings per week, $20; average earnings per hour, 29c.; number of working hours per week depend on the traffic; number of idle days per member during year, uncertain; general cause of idleness, slackness of freight; total number (union and non-union) employed at calling in locality, 41; no difference in wages or hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits; death, $1,000 to $5,000; have disability and relief fund; body incorporated and registered. President, R. A. Dickson, Brock St. W., Brockville; Corresponding Secretary, Geo. M. Pismock, 63 John St., or Box 707, Brockville; meets 1st Monday in month.

Name,—Brotherhood of Locomotive Firemen and Enginemen, Lodge 69. Organized 1875; total membership, 59; average earnings per week, $18; wages paid monthly; general cause of idleness, slackness in freight and variation in business; total number (union and non-union) employed at calling in locality, 65; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, amount of insurance policy held in organization; out of work benefits are given only in case of strike; company have a pension fund after employee reaches the age of 60 years; have instruction classes in airbrake and locomotive management; body incorporated and registered. President, R. H. Weir, Brockville; Corresponding Secretary, F. C. Race, Brockville; meets Thursday at 1.30 p.m.

Name,—Brotherhood of Locomotive Engineers. Organized 1873; total membership, 41; average earnings per week, $25; wages paid monthly; general cause of idleness, slackness of freight traffic; total number (union and non-union) employed at calling in locality, 42; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, sickness, $3.50 per week by company and $3.50 per week by society; death, $750 to $4,000 by society and $750 to $2,000 by company; superannuation, one per cent. of amount earned while in company's service per year by company and $25 per month by society if disabled and no other means of support; occasionally have evening classes of instruction; body incorporated and registered. President, E. Mortimer, Box 666, Brockville.

Name,—United Brotherhood of Carpenters and Joiners of N. A., No. 799. Organized 1900; total membership, 41; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 60; general cause of idleness, dullness in trade; total number (union and non-union) employed at trade in locality, 60; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, 5c. per hour in favour of members; cash benefits, death, $200. President, Edw. J. Byrne, Box 896, Brockville; Corresponding Secretary, Wm. Hastings, Perth St., Brockville; meets every Thursday in month.

Carleton Place.

Name,—International Moulders' Union of N. A., No. 362. Organized 1898; total membership, 25; average earnings per week, $20; average earnings per hour, 40c.; average working hours first five days, 40; number on Saturday, 10; except June, July and August when no work is done; wages paid fortnightly; number of days idle per member during year,30; general cause of idleness, holidays and stock-taking; total number (union and non-union) employed at trade in locality, 31; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits, lack of employment, none, except in case of strike, $7 per week; sickness $5 per week for 13 weeks; death, 1 year membership, $100; 5 to 10 years, $150; 10 to 15 years, $175; 15 years and over, $200; out of work benefit, dues remitted. President, John McQuaig, Carleton Place; Corresponding Secretary, J. R. Robertson, Box 292; meets 1st and 3rd Thursdays in month.

Name,—International Association of Machinists, Victoria Lodge, No. 211. Total membership, 57; average earnings per week, $16.50; average earnings per

hour, 30c.; number of working hours first five days, 50; number on Saturday, 5; wages paid monthly; average number days idle per member during year, 30; general cause of idleness, dullness of work; total number (union and non-union) employed at trade in locality, 36 union men; 1 non-union; no difference in wages and hours of labour of those engaged at trade in locality; cash benefits, when on strike, $8 per week; death, $200; superannuation, $1,000. President, G. Grant, Victoria St., Carleton Place; Recording Secretary, J. H. McFadden, Box 326, Carleton Place; meets 2nd and 4th Mondays in month.

Name,—International Brotherhood of Blacksmiths and Helpers, Local 424. Organized Sept. 12, 1903; total membership, 15; average earnings per week, $14; average earnings per hour, 24c.; number of working hours first five days, 50; number on Saturday, 5; wages paid monthly; average number of days idle per member during year, 25; general cause of idleness, closed down; total number (union and non-union) employed at trade in locality, 20. President, Thos. Aberneathy, Carleton Place; Corresponding Secretary, R. G. Curtis, Box 224, Carleton Place; meets 4th Saturday in month.

Name,—Bricklayers' and Masons' International Union, No. 28. Organized July 29, 1904; total membership, 4; average earnings per hour, 39c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, about five months; general cause of idleness, frost and no work; total number (union and non-union) employed at trade in locality, 6; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; non-members work for $2 to $2.50 per day of 10 hours; body incorporated and registered. President, Patrick McGregor, Joseph St., Carleton Place; Corresponding Secretary, A. B. Hamilton, Joseph St., Carleton Place; meets 2nd and 4th Tuesdays in month.

Collingwood.

Name,—Bricklayers' and Masons' International Union, No. 19. Organized Sept. 6. 1902; total membership, 11; average earnings per hour, 37½c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, 175; general cause of idleness, winter months; total number (union and non-union) employed at trade in locality, 7; difference in wages and hours of labour of those engaged in locality between members and non-members of organization, non-union wages range from 25c. to 30c. per hour. President, Edwin Chamberlain, Collingwood; Corresponding Secretary, Willis Court, Box 797, Collingwood; meets 3rd Wednesday in month.

Name,—Journeymen Barbers' International Union, No. 536. Organized May 23, 1903; total membership, 7; average earnings per week, $10 to $12; number of working hours first five days, 50; number on Saturday, 13; wages paid weekly; general cause of idleness, holidays; total number (union and non-union) employed at trade in locality, 15; cash benefits, sickness, $5 per week; death. $75 to $500. President, Leonard Fryer, Huron St., Collingwood; Corresponding Secretary, Fred Bollen, Hurontario St., Collingwood; meets 1st and 3rd Monday in month.

Name,—International Union of Steam Engineers, No. 321. Organized Oct. 22, 1906; total membership, 6; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first five days, 50; number on Saturday,

10; wages paid fortnightly; total number (union and non-union) employed at calling in locality, 7; difference in wages and hours of labour of those engaged at calling in locality, between members and non-members of organization, $1.00 per week; no difference in hours; body registered. President, John Bannon, Collingwood; Corresponding Secretary, E. J. Mallen, Collingwood; meets 1st Monday in month.

Name,—International Longshoremen's Association. Organized March, 1903; total membership, 30; average earnings per week, $12.50; average earnings per hour, 30c.; number of working hours first five days, 50; number on Saturday, 10; average number of days idle per member during year, 100; general cause of idleness, slackness in traffic and winter weather; all are members of association in locality. President, Benjamin Barnes, Ste. Marie St., Collingwood; Corresponding Secretary, Ernest Johnston, Beach St., Collingwood; meets 1st and 3rd Thursday in month.

Cornwall.

Name,—Journeymen Tailors' Union of A., No. 355. Organized July 1st, 1902; total membership, 11; average earnings per week, $12; average earnings per hour, 25c.; number of working hours first five days, 50; number on Saturday, 10; wages paid weekly; average number of days idle per member during year, 24; general cause of idleness, slackness in trade; all are members of organization in locality; cash benefits, sickness, $5 per week; death, $100; out of work benefit, $5 per week; body incorporated and registered. President, T. Dalbrec, Fifth St. E., Cornwall; Corresponding Secretary, Chas. Stafford, Second St. E., Cornwall; meets 1st Monday in month.

Chapleau.

Name,—Independent Brotherhood Maintenance of Way Employees, (Cartier Lodge), No. 237. Organized July 6, 1900; total membership, 150; average earnings per week, $11; average earnings per hour, 18c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; total number (union and non-union) employed at calling in locality, mostly all permanent men are union men; no difference in wages and hours of labour of those employed at calling in locality between members and non-members of organization; body incorporated and registered. President, H. C. Mulligan, Chapleau; meets at call of President.

Name,—Brotherhood Locomotive Firemen and Engineers' (Snowdrift Lodge), No. 321. Organized 1886; total membership, 83; average earnings per week, $25; number of working hours per week, mileage system; general cause of idleness, traffic depression; total number (union and non-union) employed at calling in locality, 150; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization, provided all have sufficient experience to draw senior pay; cash benefits, sickness, $4 per week; death, $500, $1,000, $1,500, $2,000 and $3,000; body incorporated and registered. President, J. F. Burns, Chapleau; Corresponding Secretary, Simon Kruger, Chapleau; meets every Wednesday at 1.30 p.m.

Name,—Brotherhood Locomotive Engineers, Sub-Div. 319. Organized Oct. 2, 1886; total membership, 55; average earnings per week, paid by mileage; wages paid monthly; general cause of idleness, regulated by amount of traffic, very busy

after close of navigation; total number (union and non-union) employed at calling in locality from 60 to 65; no difference in wages or hours of labour of those employed at calling in locality, between members and non-members of organization; cash benefits, an insurance association in connection with the organization, older members assist men who are ready for promotion; body incorporated and registered. President, James Rose, Chapleau; Corresponding Secretary, B. L. McLennan, Box 77, Chapleau; meets every Monday at 2 p.m.

Dundas.

Name,—International Moulders' Union, No. 269. Organized Feb. 17, 1900; total membership, 11; average earnings per week, $14.50; average earnings per hour, 29c.; number of working hours first five days, 50; number on Saturday, none; wages paid fortnightly; general cause of idleness, slackness of work; total number (union and non-union) employed at trade in locality, 13; no difference in wages and hours of labour of those engaged at trade in locality, between members and non-members of organization; cash benefits, sickness, $5.40 per week; death, from $100 to $200; out of work, dues remitted. President, James Smith, Dundas; Corresponding Secretary, Wm. Watts, Box 315, Dundas; meets 3rd Monday in month.

Elk Lake.

Name,—Miners' Union (W. F. M.), No. 140. Organized Jan. 10, 1909; total membership, 250; average earnings per week, $18; number of working hours first five days, 45; number on Saturday, 9; wages paid monthly; total number (union and non-union) employed at calling in locality, floating population; no difference in wages and hours of labour of those engaged in calling in locality, between members and non-members of organization; cash benefits, sickness, $7 per week; death, $50; have reading room and athletic club; body incorporated and registered. President, Patrick Cashman, Box 344, Elk Lake; Corresponding Secretary, Chas. H. Lowthian, Box 348, Elk Lake; meets Sunday.

Essex.

Name,—International Brotherhood Maintenance of Way Employees (Townsend Lodge), No. 312. Organized Jan. 17, 1907; total membership, 40; average earnings per week, $9.60; average earnings per hour, 16c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; general cause of idleness, slack work in winter months; total number (union and non-union) employed at calling in locality, 46; body incorporated and registered, Corresponding Secretary, P. Diltz, Box 322, Essex; meets 2nd and 4th Tuesday in month.

Fort William.

Name,—International Longshoremen's Association (Grain Trimmers), No. 479. Organized 1904; total membership, 25; average earnings per week, $20; average earnings per hour, 25c.; number of working hours first five days, 60; number on Saturday, 15; wages paid weekly; average number of days idle, per member during year, 149; general couse of idleness, stoppage of navigation; total number (union and non-union) employed at calling in locality, 35; no difference

in hours of labour and wages, as all are members of the association in locality; body incorporated and registered. President, T. Hall, 19 Ontario St., Port Arthur; Corresponding Secretary, John Laurie, 131 John St. S., Fort William; meets 1st Wednesday in month.

Name,—Brotherhood of Boilermakers' and Iron Ship Builders' and Helpers' of America, No. 505. Organized Oct. 9, 1907; total membership, 18; average earnings per week, $20; average earnings per hour, 40c.; number of working hours first five days, 47½; number on Saturday, 5; general cause for idleness, holidays; wages paid monthly; all are members of union in locality; cash benefits; death, $50 to $100. President, Frederick Stafford, 318 Ogden St. Fort William; Corresponding Secretary, Wm. Morris, 335 Ogden St., Fort William; meets at call of President.

Name,—International Brotherhood of Maintenance of Way Employees, Fort William Div., No. 128. Organized Feb., 1903; total membership, 120; average earnings per week, $9 to $18; average earnings per hour, 15c. to 30½c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; general cause of idleness, reduction of staff in winter months; cash benefits, insurance features optional. President, P. J. Watson, 429 S. Archibald St., Fort William; Corresponding Secretary, Albert Rowe, 114 North Harold Street, Fort William; meets 4th Saturday in month.

Name,—International Longshoremen and (Coal Handlers) Trimmers' Association, No. 746. Organized Aug. 27, 1906; total membership, 150; average earnings per hour, 29c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; general cause of idleness, winter months and slack times; total number (union and non-union) employed at calling in locality, about 500; difference in wages and hours of labour of those engaged at calling in locality, between members and non-members of organization, in some cases 5c. per hour in favour of members, in others none; hours of work the same; cash benefits, in case of death caused by accident, $50. Corresponding Secretary, G. E. Boss, Fort William; meets 3rd Wednesday in month.

Name,—Order of Railroad Conductors, Kakabeca, Div. 286. Total membership, 49; average earnings per week, $27.78; average earnings per hour, 42c; number of working hours first five days, 54; number on Saturday, 9; wages paid monthly; no idle days during year; all are members of the division in locality; cash benefits; death, $1,000 to $3,000; in case of strike a benefit is paid, the amount of which is made known at time; body incorporated and registered. Chief Conductor, D. H. Beaton, 436 Syndicate Avenue, Fort William; Corresponding Secretary, A. B. Marcotte, 439 Wiley Street, Fort William; meets 2nd and 4th Sunday in month.

Name,—International Moulders' Union, Local 429. Organized Sept, 28, 1906; total membership, 12; wages paid fortnightly; cash benefits, sickness, $5.40 for 13 weeks in each year; death, one to five years' membership, $100; five to ten years, $150; ten to fifteen years, $175; fifteen years and over, $200; out of work, exemption from dues for 13 weeks in each year. President, Wm. Fleming, Jr., Corresponding Secretary, F. Christianson, 34 Ruttan St., Port Arthur; meets 4th Saturday in month.

Name,—International Association of Machinists' Helpers, A. F. of L., Local 12799. Organized June 4, 1909; total membership, 34; average earnings per week, $13; average earnings per hour, 24c.; number of working hours first five days, 45; number on Saturday, 9; wages paid monthly; general cause of idleness, holidays;

total number (union and non-union) employed at trade in locality, union, 34, non-union 6; no difference in wages and hours of labour of those engaged at trade in locality, between members and non-members of organization. President, Samuel Palmer, McTavish St., Fort William; Corresponding Secretary, Herbert Slater, 523 Wiley St., Fort William; meets 3rd Wednesday in month.

Name,—Amalgamated Society of Carpenters and Joiners, No. 787. Organized March 20, 1908; total membership, 130; average earnings per week, $24; average earnings per hour, 40c; number of working hours first five days, 50; number Saturday, 10; wages paid fortnightly; average time idle per member during year, 10 weeks; cause of idleness, lack of work; total number (union and non-union) employed at trade in locality, 500; no difference in wages or hours between members and non-members; lack of employment benefits, $2.50 per week; sick benefits, $3 per week; death benefits, $60; superannuation, $2 per week for life for members for 25 years; no special work for members; incorporated and registered. President, Arthur Watkins, 409 Wiley Street, Fort William; Corresponding Secretary, H. Edwards, 134 South Franklin Street, Fort Wiliam; meets 1st and 3rd Mondays.

Fort Frances.

Name,—United Brotherhood of Carpenters and Joiners of America. Average earnings per week, $14; average earnings per hour, 35c; number of working hours first five days, 50; number on Saturday, 10; average number of days idle during year, 100; general cause of idleness, dullness in building trades and inclement weather; total number (union and non-union) employed at trades in locality, 25; difference in wages and hours of labour of those engaged at trades in locality between members and non-members of organization, more for good mechanics; handy men receive 5c. to 10c. per hour less than the scale; death benefits, $200 to $400; body incorporated. President, J. Wallace, Fort Frances; Corresponding Secretary, A. C. Blow, Fort Frances; meets 1st and 3rd Monday in month.

Galt.

Name,—International Moulders' Union, No. 447. Organized 1903; total membership, 60; average earnings per week, $13; average earnings per hour, 23c; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 30; general cause of idleness, weather; number (union and non-union) employed at trade in locality, 150; no difference in wages and hours of labour of those engaged at trade in locality, between members and non-members of organization; cash benefits, lack of employment, dues, remitted for 13 weeks; sickness, $5.40 per week; death, from $100 to $200. President, A. A. Lonigan, Galt; Corresponding Secretary, David Melvin, Box 356, Galt; meets 1st and 3rd Mondays in month.

Name,—International Typographical Union, No. 411. Organized April, 1901; total membership, 18; average earnings per week, $11.52; average earnings per hour, 24c; number of working hours first five days, 42½; number on Saturday, 5½; wages paid weekly and fortnightly; average number of days idle per member during year, very seldom any are idle; total number (union and non-union) employed at trade in locality, 20; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits; death, $75; superannuation, $4 per week after 60 years of age; body

registered. President, Frank Herschell, North Water Street, Galt; Corresponding Secretary, J. J. Turnbull, 24 Forbes Street, Galt; meets 1st Tuesday in month.

Name,—Journeymen Barbers' International Union of America. Organized 1902; total membership, 14; average earnings per week, $11; average earnings per hour, 11c; number of working hours first five days, 45; number on Saturday 14; wages paid weekly; total number (union and non-union) employed at trade in locality, 28; difference in wages and hours of labour of those engaged aet trade in locality between members and non-members of organization, union men have half a day off in each week; cash benefits; death, from $200 to $500; body incorporated. President, Herb Carter, Galt; Corresponding Secretary, Jas. A. Allan, cor. Dickson and Water Streets, Galt; meets last Thursday in month.

Name,—American Federation of Musicians, No. 124. Organized April, 1908; total membership, male, 36; female, 3; no stated salaries; average earnings per hour, male, 50c.; female, 50c. for nights that are orchestras; all are members of association in locality who take engagements, and prices are same; have instruction and entertainment in band room; body incorporated and registered. President, Wm. Ewart, Galt; Corresponding Secretary, P. G. Rupell, Walnut Street, Galt; meets 1st Tuesday in month.

Name,—Amalgamated Society of Engineers and Machinists, Branch No. 666. Organized Nov. 1903; total membership, 15; average earnings per week, $12.38; average earnings per hour, 22½c; number of working hours first five days, 50; number on Saturday, 5; wages paid fortnightly; general cause of idleness, dullness in trade; total number (union and non-union) employed at trade in locality, about 200; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits; lack of employment, $2.50 per week; sickness, $2.50 per week; death, $60; superannuation, $1.45 to $2.50 per week; body is registered in England. President, Samuel Schofield, Galt; Corresponding Secretary, C. J. Aitken, Galt; meets alternate Wednesdays.

Guelph.

Name,—International Moulders' Union, No. 212. Organized June 3, 1881; total membership, 94; average earnings per week (piece work), $17 to $24; day work, $2.75 per day; number of working hours first five days, 50; number on Saturday, 9; wages, principally paid weekly; average number of days idle per member during year, from 1 week to 3 months; general cause of idleness, various reasons; total number (union and non-union) employed at trade in locality, 150; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, hours about the same; wages about 50c more for union men; cash benefits; strike benefits, $7 per week; sickness, $5.40 per week; death, as high as $200; out of work, dues remitted for 13 weeks in one year. President, Freeman Felker, St. Arnold Street, Guelph; Corresponding Secretary, J. R. Thatcher, 47 Inkerman Street, Guelph; meets 1st and 3rd Fridays in month.

Name,—Bricklayers' and Masons' Union, No. 3. Organized 1882; total membership, 25; average earnings per week, $20; average earnings per hour, 43c; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly and fortnightly; average number of days idle per member during year, 100; general cause of idleness, winter months; total number (union and non-union) employed at trade in locality, 30; no difference in wages and hours of labour between members and non-members of organization engaged in locality; cash benefits; there are

no particular funds, but members look after the needy; have reading room. President, Israel Teehla, Stuart Street, Guelph; Corresponding Secretary, John Gould, 107 Alma Street, Guelph; meets 2nd and 4th Thursday in month.

Name,—Brussels Carpet Weavers' Union, No. 277. Organized August, 1900; total membership, 12; number of working hours first five days, 50; number on Saturday, 5; wages paid fortnightly; general cause of idleness, strike on since Dec. 11, 1909; there are 25 non-union at trade in locality; difference in wages and hours of labour of those engaged at trade in locality, between members and non-members of organization, since strike cuts in wages average from 10 to 20 per cent.; cash benefits; death, International pays $55. President, A. Holzman, 57 Toronto Street, Guelph; Corresponding Secretary, Thos. Hall, 17 Hooper Street, Guelph; meets 2nd Monday in month.

Name,—International Typographical Union, No. 391. Organized July, 1900; total membership, 27; average earnings per week, $14.25; average earnings per hour, 29c.; number of working hours first five days, 42; number on Saturday, 6; wages paid weekly; general holidays only idle time; all printers in locality are members of organization; cash benfits; superannuation, $4 per week after 20 years' continuous membership and 60 years of age; death, $75, I. T. U. President, Alfred C. Humphries, Dublin Street, Guelph; Coresponding Secretary, C. P. Doughty, 105 Neeve Street, Guelph; meets 2nd Monday in month.

Name,—Piano and Organ Workers' No. 34. Organized May 22, 1902; total membership, 86; average earnings per week, $12.10; average earnings per hour, 22½c; number of working hours first five days, 50; number on Saturday, 5; wages paid fortnightly; average number of days idle per member during year, 74; cause of idleness, stocktaking and holidays; total number (union and non-union) employed at trade in locality, 200; no difference in wages or hours of labour between members and non-members; sick benefits, $5; death benefits, $50 to $300, according to length of membership; out of work benefits, dues allowed; have a shop mutual benefit society paying $4.75 per week for sickness or accident; no special work for members; not incorporated or registered. President, J. Brohman, Kent Street, Guelph; Corresponding Secretary, Geo. Cutting, 127 Paisley Street, Guelph; meets 1st and 3rd Thursdays.

Hamilton.

Name,—Boot and Shoe Workers' International Union, No. 228. Organized Nov. 3, 1900; total membership, 100; average earnings per week, piece-work system; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, two weeks; general cause of idleness, stocktaking; all are members of union in locality; cash benefits $8 per week; death $130. President, Jos. Gimblett, 73 Oxford St., Hamilton; Corresponding Secretary, H. Harrison, 43 Melbourne St., Hamilton; meets 3rd Tuesday in month.

Name,—Boot and Shoe Workers' International Union, No. 234 (Female). Organized April 10, 1895; total membership, 80; average earnings per week, $5 to $12, according to work; average earnings per hour, 11c upwards; number of working hours first five days, 45; number on Saturday, 4; wages paid weekly; general cause of idleness, stocktaking each spring; cash benefits, sickness, $5 per week; death, $100; body incorporated and registered. President, Mrs. Thereza Epps, 13 Aikman Avenue, Hamilton; Corresponding Secretary, Margaret Ballantine, 194 Bold St., Hamilton; meets 4th Thursday in month.

Name,—International Alliance of Stage Employees, No. 129. Organized July, 1906; total membership, 28; average earnings per week, $12; average earnings per hour, 30c; number of working hours first five days, 30; number on Saturday, 12; wages paid weekly; average number of days idle per member during year, about 3 months; general cause of idleness, theatres close during June, July and August; total number (union and non-union) employed at calling in locality, about 50; difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization, about 40c. on $ or 60c. per show; body incorporated. President, Wm. Mitson, Dundas P. O.; Corresponding Secretary, George Elville, 66 Simcoe St. W., Hamilton; meets 4th Sunday in month.

Name,—Amalgamated Sheet Metal Workers' International Alliance, No. 61. Total membership, 46; average earnings per week, $14; average earnings per hour, 32½c; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; number of days idle per member during year, 45; general cause of idleness, principally weather conditions; total number (union and non-union) employed at trade in locality, about 50; cash benefits; death, $100. President, Richard March, 342 East Avenue N., Hamilton; Corresponding Secretary, Chris. H. Holtham, 145 East Wood St., Hamilton; meets 1st and 3rd Fridays.

Name,—Musicians' Protective Association, No. 93. Organized April 9, 1903; total membership, male, 200; female, 5; cash benefits, relief committee attends to all cases of sickness. President, A. J. Milligan, 81 Picton St. E., Hamilton; Corresponding Secretary, Jos. Gimblett, 73 Oxford St., Hamilton; meets 2nd Sunday in month.

Name,—Order of Railway Conductors, Div. No. 27. Organized April, 1881; total membership, 46; average earnings per week, $18; average earnings per hour, 30c; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; average number of days idle per member during year, 15; general cause of idleness, depression in traffic; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; all are members in locality. President, Jas. McMahon, 198 Gibson Avenue, Hamilton; Corresponding Secretary, J. E. Oldfield, 150 Catherine St. S., Hamilton; meets 1st and 3rd Sunday of month at 2.30 p.m.

Name,—Hamilton Typographical Union, No. 129. Organized September, 1869; total membership, 115; average earnings per week, $16; average earnings per hour, 33 1-3c; number working hours first five days, 40 for news, 43 for job; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, practically nil; total number (union and non-union) employed at trade in locality, 122; cash benefits, death, $75; superannuation, $4 per week. President, James T. Bonner, Herald, news department; Corresponding Secretary, John J. Burns, 115 East Murray St., Hamilton; meets 2nd Wednesday in month.

Name,—Stove Mounters' and Steel Range Mounters' International Union, No. 35. Total membership, 10; average earnings per week, $10; average earnings per hour, 20c; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 75; general cause of idleness, slackness in trade. President, Albert Reid, 33 Spring St., Hamilton; Corresponding Secretary, Thos. Bevers, 35 Tisdale St., Hamilton; meets 3rd Monday in month.

Name,—Journeymen Barbers' International Union of America, No. 131. Organized 1900; total membership, 85; average earnings per week, $12; number of working hours first five days, 45; number on Saturday, 13; wages paid weekly; no idle days during year; total number (union and non-union) employed at trade in

locality, about 30; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, about $2 per week less and about seven hours more per week for non-members; cash benefits, sickness, $5 per week; death, $75 to $500. President, Wm. McEaid, 107 James St., N., Hamilton; Corresponding Secretary, H. J. Halford, 59 John St. S., Hamilton; meets 1st and 3rd Monday in month.

Name,—Federal Union, No. 11 (City Firemen). Organized January, 1900; total membership, 57; wages paid fortnightly; cash benefits, death, $50. President, D. L. McCarthy, Park St. N., Hamilton; Corresponding Secretary, Jas. Hotrum, 251 Wellington St. N.; meets 1st Monday in month.

Name,—Brotherhood of Railroad Trainmen, Bay View Lodge, No. 226. Organized July 4, 1886; total membership, 132; average earnings per week, about $12; average earnings per hour, 20c to 25c; number of working hours first five days, 50 to 60 on yard work and trips are of unlimited time on road; number on Saturday, same as on other days; wages paid monthly; number of days idle per member during year, uncertain; total number (union and non-union) employed at calling in locality, about 155 to 160; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, death $500, $1,000 and $1,350; body registered. President, W. R. Campbell, 17 Crook St., Hamilton; Corresponding Secretary, Arthur Smith, 19 Melbourne St., Hamilton; meets 2nd and last Saturdays in month at 2 p.m.

Name,—Journeymen Horseshoers' Union, No. 72. Organized March 23, 1896; total membership, 13; average earnings per week, $14.50; average earnings per hour, 26½c.; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; total number (union and non-union) employed at trade in locality, 20; body registered. President, W. B. Allen, 132 Caroline St., Hamilton; Corresponding Secretary, A. M. Deeker, 83 Smith Avenue, Hamilton; meets 2nd and 4th Wednesdays in month.

Name,—International Broom and Whisk Workers' Union, No. 9. Organized May 15, 1900; total membership, 20; average earnings per week, $13.80; average earnings per hour, 25c; number of working hours first five days, 45; number on Saturday, 4½; wages paid weekly; number of days idle per member during year, 20; general cause of idleness, stocktaking; all are members of organization in locality; cash benefits, strike benefits, $5 per week. President, Walter Armstrong, 66 New St., Hamilton; Corresponding Secretary, W. H. McAdam, 90 Catharine St. S., Hamilton; meets 2nd Monday in month.

Name,—Brotherhood of Railway Carmen of America. Organized Aug. 26, 1907; total membership, 25; average earnings per week, $10; average earnings per hour, 20c; number of working hours first five days, 50; number on Saturday, 9; wages paid monthly; number of days idle per member during year, 14; general cause of idleness, public holidays; total number (union and non-union) employed at calling in locality, 32; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; body incorporated and registered. President, J. L. McIntyre, 59 Palace St., Brantford; Corresponding Secretary, A. E. Wilson, 291 Barton St. W., Hamilton; meets 3rd Sunday in month.

Name,—Journeymen Stonecutters' Association of North America. Organized Dec. 5, 1853; total membership, 34; average earnings per week, $20.90; average earnings per hour, 47½c; wages paid fortnightly; average number of days idle per member during year, 100; general cause of idleness, winter weather; all are members of association in locality; no non-union men practically in city; cash benefits,

death, $100; body chartered. President, Geo. Campbell, 607 Main St. E., Hamilton; Corresponding Secretary, W. H. Jenkins, 10 Stinson St., Hamilton; meets 2nd and 3rd Thursday.

Name,—Brotherhood Locomotive Engineers, No. 133. Total membership, 60; average earnings per week, $20; spare men, $16; average earnings per hour, 30c; number of working hours first five days, 50 or more; number on Saturday, same as other days; wages paid monthly; general cause of idleness, depression in trade, sickness and suspension; cash benefits, death and disability, insurance, superannuation, G. T. R. pension, indigent fund for incapacitated members amounting to $25 per month, not belonging to insurance; body incorporated and registered. President, W. S. Stone, G. Chief Engineer, Cleveland, Ohio; Jas. Oliver, Chief, 298 Lock Street, Hamilton; Corresponding Secretary, A. A. Griffith, 81 Murray St. E., Hamilton; meets 2nd and 4th Sunday in month.

Name,—Amalgamated Society of Carpenters and Joiners, No. 789. Total membership, 120; average earnings per hour, 35c; number of working hours first five days, 40; number on Saturday, 4; general cause of idleness, weather conditions; cash benefits, lack of employment, $2.50 per week; sickness, $3 per week; death, $60; superannuation, $1.50 to $2 per week. President, Archie Burton, 46 Garfield Avenue, Hamilton; Corresponding Secretary F. H. Smith, 18 Ardvorlich St., Hamilton; meets alternate Monday in month.

Name,—Printing Pressmen and Assistants' International Union, No. 176. Organized Nov. 5, 1904; total membership, 52; average earnings per week, $12.10; average earnings per hour, 25c; number of working hours first five days, 43½; number on Saturday, 4½; wages paid weekly; steady work during year; total number (union and non-union) employed at trade in locality, 60; those who are not members of organization are employers. President, William Brooks, Duncan Printing Co., Hamilton; Corresponding Secretary, Alf. W. Wilkes, 38 Ashley St., Hamilton; meets 4th Friday in month.

Name,—Brotherhood of Painters and Decorators, Local 205. Organized May, 1887; total membership, 56; average earnings per week, $12; average earnings per hour, 30c; number of working hours first five days, 45; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, they vary; general cause of idleness is owing to the increasing number of immigrants there is not enough work to go round; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union men receive 30c per hour, while non-union men work for any price; cash benefits, death, $300. President, S. J. Corvan, 22 Gore St., Hamilton; Corresponding Secretary, F. J. Dwyer, 84 Murray St. E., Hamilton; meets 1st and 3rd Monday in month.

Name,—Amalgamated Society of Engineers, No. 646. Organized 1851; total membership, 80; average earnings per week, $15; number of working hours first five days, 50; number on Saturday, 5; wages paid fortnightly; cash benefits, sickness, $2.50 per week; death, $60; superannuation, $2.50 per week; out of work, $2.50 per week; benefits vary according to length of membership; body incorporated and registered. President, S. Clonker, 64 Frances St., Hamilton; Corresponding Secretary, R. C. Paterson, 187 Napier St., Hamilton; meets alternate Fridays in month.

Name,—International Cigarmakers' Union, No. 55. Organized 1864; total membership, male, 260; female, 15; avervage earnings per week, male, $11; female $11; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; number of days idle per member during year, 17; general cause of

idleness, stocktaking; all are members of union in locality; cash benefits, sickness, $5 per week; death, $50 to $550; out of work benefit, $3 per week; body incorporated. President, C. J. Meaden, 11 McNeil St., Hamilton; Corresponding Secretary, J. Hough, 170 Duke St., Hamilton; meets Monday.

Name,—International Shoe Cutters' Union, No. 232. Organized January, 1905; total membership, 36; average earnings for week, $13 to $20; average earnings per hour, 24c; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; average number of days idle during year, 14; general cause of idleness, holidays and stocktaking; all are members of union in locality; cash benefits, sickness, $8 per week; death, $100. President, Jos. Lee, 78 Ray St., Hamilton; Corresponding Secretary, John Wright, 123 John St. S., Hamilton; meets 4th Friday in month.

Name,—Amalgamated Association of Street and Electrical R. Employees of America, Div. No. 107. Organized April, 1899; total membership, 130; average earnings per week, $12; average earnings per hour, 18c; number of working hours first five days, 55; number on Saturday, 11; wages paid fortnightly; no unnecessary idle days during year; total number (union and non-union) employed at calling in locality, about 225; no difference between members and non-members of organization as regards hours or wages; cash benefits, sickness $3 per week for four weeks; death, $100 by International. President, J. T. Burrows, 84 Lock St. N., Hamilton; Corresponding Secretary, Alex. Lamond, Box 205, Hamilton; meets 1st and 3rd Saturday in month.

Name,—Metal Polishers, Buffers and Platers' International Union. Total members, 47; average earnings per week, $16.50; average earnings per hour, 27½c; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; number of days idle per member during year, 60; general cause of idleness, falling off of trade industry after Christmas; total number (union and non-union) employed at trade in locality, about 60; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, hours the same, union men receive average of $2.75 a day; non-union, about $2; cash benefits, $1 per month; sickness, $3.50 a week; death, $50 to $100. President, Wm. Dewatt, 317 Cannon St. E., Hamilton; Corresponding Secretary, J. Wooldridge, 172 Catherine St. S., Hamilton; meets 1st and 3rd Wednesday.

Name,—Journeymen Tailors' Union of America, No. 149. Organized 1883; total membership, male 60; female, 20; average earnings per week; male, $15; female, $7; average earnings per hour, male, 25c; female, 18c; wages paid weekly; average number of days idle per member during year, 30; general cause of idleness, holidays; total number (union and non-union) employed at trade in locality, male, 70; female, 50; cash benefits, sickness, $5 per week; death, $100; body registered. President, James Lennie, Aberdeen Avenue, Hamilton; Corresponding Secretary, Harry Eicoff, Lock St. N., Hamilton; meets last Monday in month.

Name—United Brotherhood of Leather Workers on Horse Goods. Organized July 28, 1910; total membership, 15; average earnings per week, $12; average earnings per hour, 20c; number of working hours first five days, 50; number on Saturday, 9; wages paid fortnightly; general cause of idleness, stocktaking for a period of seven days; total number (union and non-union) employed at trade in locality, 40; no difference in wages or hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits, $5 per week for 13 weeks; death, $100; body registered. President, J. A. Minn, 33

Nightingale St., Hamilton; Corresponding Secretary, A. Edgerler, 81 Wellington St. S., Hamilton; meets 1st and 3rd Friday in month.

Name,—Tobacco Workers' International Union, No. 48. Total membership, 180; number of working hours first five days, 50; number on Saturday, 5; work both by piece and day work; cash benefits, $3 per week; death, $50; body registered. President, Thos. Finnagin, 3a Park St. S., Hamilton; Corresponding Secretary, A. H. Broughton, 22 Hunt St., Hamilton; meets 2nd and 4th Monday in month.

Ingersoll.

Name,—International Brotherhood of Maintenance of Way Employees. Total membership, 30; average earnings per week, $11.15; average earnings per hour, 18½c; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; average number of days idle per member during year, varies; general cause of idleness, reduction of force during winter; total number (union and non-union) employed at calling in locality, 40; no difference in wages or hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, insurance optional. President, M. Sprague, Ingersoll; Corresponding Secretary, D. McCord, Belmont; meets at call of President.

Jack Fish.

Name,—Maintenance of Way Employees. Organized April, 1892; total membership, 70; average earnings per week, $10.20; average earnings per hour, 17c; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; total number (union and non-union) employed at calling in locality, 150; no difference in wages or hours of labour of those engaged at calling in locality between members and non-members of organization; body incorporated and registered. President, John Lerwill, Heron Bay; Corresponding Secretary, A. Bianconi, Jack Fish; meets last Saturday in month.

Kingston.

Name,—Hodcarriers' and Builders' Labourers' Union, No. 66. Organized 1894; total membership, 111; average earnings per week, $12; average earnings per hour, 25c; number of working hours first five days, 40; number on Saturday, 8; average number of days idle per member during year, 90; general cause of idleness, winter weather; total number (union and non-union) employed at calling in locality, 150; difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization, non-union men work 10 hours per day and receive $1.25 to $1.75; cash benefits, death, $50 to $100. President, D. Dougherty, Kingston; Corresponding Secretary, A. C. Smith, 469 Division St., Kingston; meets 1st and 3rd Wednesday in month.

Name,—Masters' and Mates' Association. Organized 1901; have reading-room for use of members during winter months. President, Capt. Edward Booth, 112 Alfred Street, Kingston; Corresponding Secretary, George Huntz, 298 Collingwood St., Kingston; meets at call of President.

Name,—Lake Seamen's Union. Organized July, 1905; total membership, 200; average earnings per week, from $6 to $11.50; wages paid monthly or at end of trip; average number of days idle per member during year, 120; general cause of idleness, close of navigation; difference in wages and hours of labour of those en-

gaged at calling in locality between members and non-members of organization, 25c to 50c. per day on sailing vessels; cash benefits, sickness, small weekly payment; death, $75; $30 for loss of clothing in wreck or fire; $30 for disability benefit; have reading room for use of members during winter months. President, chairman elected at each meeting; Corresponding Secretary, T. H. Fleming, Business Agent, Box 96, Kingston; meets each Monday in month.

Name,—Journeymen Tailors' Union of America, No. 263. Organized 1883; total membership, male, 15; female, 30; average earnings per week, male, $10; female, $4; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; general cause of idleness, lack of work; total number (union and non-union) employed at trade in locality, male, 25; female, 50; cash benefits, sickness, $5 per week; death, $100; body incorporated and registered. President, Robert Alexander, 451 Albert Street, Kingston; Corresponding Secretary, Joseph Sauve, 101 Queen Street, Kingston; meets first and third Monday in month.

Name,—United Brotherhood of Carpenters and Joiners of America, No. 249. Organized June 15, 1899; total membership, 65; average earnings per week, $15; average earnings per hour, 31¼c; number of working hours first five days, 40; number on Saturday, 8; wages paid fortnightly; average number of days idle per member during year, 30 to 60; general cause of idleness, inclement weather; total number (union and non-union) employed at trade in locality, between 80 and 90; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, non-union men work 9 hours per day for $2.25; cash benefits, sickness, $3 per week for 13 weeks; death, $200; total disability, $400. President, H. Dowler, Barriefield; Corresponding Secretary, W. H. Hubble, 26 Quebec Street, Kingston; meets second and fourth Monday in month.

Name,—Bricklayers', Masons' and Plasterers' Union, No. 10. Organized June 1899; total membership, 48; average earnings per week, $12; average earnings per hour, 23c.; number of working hours first five days, 40; number on Saturday, 8; wages paid fortnightly; average number of days idle per member during year, 150; general cause of idleness, inclemency of weather; total number (union and non-union) employed at trade in locality, 55; cash benefits, death, $100; have reading-room for members during winter months. President, Alex. McCartney, 250 University Avenue, Kingston; Corresponding Secretary, Alex. Fowler, 323 Johnston Street, Kingston; meets second and fourth Tuesday in month.

Name,—National Association of Marine Engineers, Council No. 4. Organized 1901; total membership, 120; average earnings per week, $18 in winter; number of working hours first five days, 45 to 50; number on Saturday, 9; wages paid weekly in winter; monthly in summer; average number of days idle per member during year, 60 for those who do not work in winter; general cause for idleness, slackness of work; all are union in locality; have lectures during winter months. President, Richard Taylor, 90 Lower Bagot Street, Kingston; Corresponding Secretary, James Gillie, 97 Clergy Street W., Kingston; meets Mondays.

Name,—Journeymen Barbers' International Union of America, No. 514; organized April 17, 1901; average earnings per week, $12; number of working hours first five days, 50; number on Saturday, 17; wages paid weekly; total number (union and non-union) employed at trade in locality, 50; sick benefits $5 per week; death, $75 after one year; not incorporated or registered. President, Geo. Lewis, 347 Princess Street, Kingston; Corresponding Secretary, H. J. Lemon, 377 King Street, Kingston; meets last Monday.

Name,—Brotherhood of Painters, Decorators and Paperhangers of America, No. 114. Organized May 24, 1900; total membership, 35; average earnings per week, $13.50 average earnings per hour, 25c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average time idle per member during year, 2 to 3 months; cause of idleness, bad weather; non-members work from one to four hours per day longer than members; death benefits from $50 to $400; no other cash benefits; reading rooms open for members. President, Jos. Mulholland, 15 Main Street, Kingston; Corresponding Secretary, Wm. Veale, Nelson Street, Kingston; meets first and third Mondays.

London.

Name,—United Association of Plumbers and Steamfitters, No. 289. Organized January, 1907; total membership, 20; average earnings per week, $15.40; average earnings per hour, 35c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; number of days idle per member during year, about 50; general cause of idleness, scarcity of work; total number (union and non-union) employed at trade in locality, 25; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union men receive 35c. per hour, non-union 25c., same hours of labour; cash benefits, sickness, $5 per week; death, $100. President, Geo. Watts, Ealing P.O.; Corresponding Secretary, Geo. F. Avey, 189 Waterloo St., London; meets first and third Tuesday in month.

Name,—Journeymen Stonecutters' Association of America. Organized Dec. 5, 1853; total membership, 9; average earnings per week, $19.80; average earnings per hour, 45c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, three months; general cause of idleness, winter weather and slackness of trade; all are union in locality; cash benefits, death, $100; body incorporated and registered. President, Jabez Mason, Colborne Street, London; Corresponding Secretary, Hugh Boyd, 875 Adelaide Street, London; meets first and third Friday in month.

Name,—Federated Association of Letter Carriers, Branch No. 4. Organized 1890; total membership, 33; average earnings per week, $16.50; maximum, $2.75 per day; minimum, $1.75 per day; wages paid fortnightly; average number of days idle per member during year few unless sick; general cause of idleness, suspension or sickness; Government is trying to regulate the hours to eight per day; cash benefits, some have superannuation fund, others have retirement fund. President, Chester Fitzgerald, 161 Princess Avenue, London; Corresponding Secretary, W. M. Empey, 573 Oxford Street, London; meets first Tuesday in month.

Name,—Brotherhood Locomotive Firemen and Engineers, Ontario Lodge, No. 468. Organized August, 1891; total membership, 45; average earnings per hour, 25c.; ten hours or 100 miles constitute one day; hours are from 5 to 24, sometimes more; wages paid monthly; cash benefits, $500 to $3,000 insurance, payable in case of death or disability; body incorporated and registered. President, Jas. Davis, 51 Miles Street, London; Corresponding Secretary, Chas. Phipps, 593 Princess Avenue, London; meets second and fourth Sunday in month, at 2 p.m.

Name,—Cigarmakers' International Union, No. 278. Organized 1891; total membership, male, 214; female, 33; average earnings per week, male, from $9 to $12; female, from $9 to $12; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; total number (union and non-union) employed

at trade in locality, 500; non-union men receive lower wages; cash benefits; sickness, $5 per week for 13 weeks; death, $50 to $550; out of work benefit, $3 per week. President, Joe Kelly, 754 Walker St., London; Corresponding Secretary, Wm. Heslop, 52 Blackfriars St. N., London; meets 1st and 3rd Tuesday in month.

Name,—Brotherhood Railroad Trainmen, London Lodge, No. 415. Organized July 13, 1891; total membership, 146; average earnings per week, $18 to $28; number of working hours first five days, hours of labour vary; wages paid monthly; idle days depend upon traffic conditions; total number (union and non-union) employed at calling in locality, about 150 steady; cash benefits, $500 to $1,350 death and disability benefits. President, Peter Kelleher, 51 Palace St., London; Corresponding Secretary, W. H. Nichol, 896 Princess Avenue, London; meets at call of President.

Name,—American Federation of Musicians. Organized February 2, 1903; total membership, male, 140; female, 10. President, A. W. Slatter, 732 Dundas St., London; Corresponding Secretary, C. M. Perrin, 352 Adelaide St., London; meets 4th Sunday in month.

Name,—Amalgamated Society of Carpenters and Joiners, London Branch, No. 792. Organized June, 1860; average earnings per week, $13.86; average earnings per hour, 28c.; number of working hours first five days, 45; number on Saturday, 4½; wages paid weekly; average number of days idle per member during year, from 30 to 70; general cause of idleness, inclement weather and dullness of trade; total number (union and non-union) employed at trade in locality, about 400; no difference in wages or hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits; sickness, $3 per week; death, $60; superannuation, $2 per week; out of work benefit, $2.50 per week. President, W. Ellis, 20 Alexander St., London; Corresponding Secretary, John Tanton, 379 Waterloo St., London; meets 2nd and 4th Wednesdays.

Name,—Canadian Association of Stationary Engineers, No. 30. Organized June, 1907; total membership, 70; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first five days, 50; number on Saturday, 10; wages paid weekly, fortnightly and monthly; no idle days; total number (union and non-union) employed at calling in locality, 100; no difference in wages or hours of labour of those engaged in calling in locality between members and non-members of organization; cash benefits, depend upon vote of lodge; have reading room, lectures and blackboard talk; body incorporated. President, D. F. Campbell, 114 Askin St., London; Corresponding Secretary, J. B. Stephenson, 35 Edgerton St., London; meets each Tuesday in month.

Name,—Amalgamated Society of Engineers, No. 669. Organized 1851; total membership, 17; average earnings per week, $12.38; average earnings per hour, 22½c.; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly and monthly; total number (union and non-union) employed at calling in locality, 150; cash benefits, lack of employment, $2.50 per week; sickness, $2.50 per week; death, $60; superannuation, $1.75 to $2.50; accident benefit, $500; body registered. President, A. McDonald, 867 Waterloo St., London; Corresponding Secretary, Geo. H. Scollick, 583 Grey St., London; meets each Friday in month.

Name,—Brotherhood of Railway Trainmen, No. 75. Organized September 23, 1883; total membership, 75; average earnings per week, $15; average earnings per hour, 20c.; number of working hours first five days, 65; number on Saturday, 13; wages paid monthly; total number (union and non-union) employed at calling in locality, 95; no difference in wages and hours of labour of those engaged at call-

ing in locality between members and non-members of organization; body incorporated and registered. President, Andy Maxwell, 307 Grey St., London; Corresponding Secretary, D. E. Patterson, 124 Hamilton Road, London; meets 2nd and 4th Sundays in month at 2.30 p.m.

Name,—Bricklayers' and Masons' International Union, No. 5, Ontario. Organized October 5, 1882; total membership, 41; average earnings per week, $19.80; wages paid weekly; average number of days idle per member during year, 175; general cause of idleness, winter weather and dullness in trade; total number (union and non-union) employed at trade in locality, 71; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, non-union men work nine and ten hours per day for 30c. to 45c. per hour; cash benefits, death, $100 to $200. President, S. H. Foxworthy, 712 Colborne St., London; Corresponding Secretary, Frank C. Pierce, 659 King St., London; meets 2nd and 4th Wednesdays in month.

Name,—Telegraphy, covering Grand Trunk System, Division No. 1. Organized 1898; average earnings per week, $12.50, or regular specified salary; number of working hours first five days, 60; number on Saturday, same as any other day of week; wages paid monthly; no idle days during year; total number (union and non-union) employed at calling in locality, about 800 all told on system; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits; death, insurance, which is optional. President, J. A. Bell, Callander; Corresponding Secretary, D. L. Shaw, 427 William St., London; meets at call of President.

Name,—Metal Polishers, Buffers and Platers, Brass Moulders and Silver Workers' Union, No. 32. Total membership, 34; average earnings per week, $18; average earnings per hour, 33c.; number of working hours first five days, 50; number on Saturday, 5, 6 and 8; wages paid weekly and fortnightly; number of days idle per member during year, 30; general cause of idleness, slackness in trade; total number (union and non-union) employed at trade in locality, 50; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, 13c. per hour less for non-union men; hours of labour same; cash benefits, lack of employment, exempt from dues; death, $100. President, D. H. Wright, 378 Burwell St., London; Corresponding Secretary, J. Cummings, Chelsea Green P.O.; meets 2nd and 4th Fridays in month.

Name,—Bartenders' International League, No. 137. Organized 1903; total membership, 50; average earnings per week, $12; number of working hours first five days, 6 and 10 hours every other day, six days per week; total number (union and non-union) employed at calling in locality, 50 union, 5 non-union; difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization, non-members receive from $4 to $6 per week; cash benefits, sickness, $5 per week; death, $100; body registered. President, George Parker, Tecumseh House, London; Corresponding Secretary, H. G. Edsalt, 58 Colborne St., London; meets 2nd and 4th Sundays in month.

Name,—International Brotherhood of Maintenance of Way Employees, No. 195. Organized 1901; total membership, 75; average earnings per week, $12; average earnings per hour, 16c. to 20c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; general cause of idleness, reduction of staff to winter basis; total number (union and non-union) employed at calling in locality, 120; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; body in-

corporated. President, D. Walsh, 431 Piccadilly St., London; Corresponding Secretary, D. Campbell, 10 Thornton St., London; meets last Saturday in month.

Name,—Journeymen Tailors' International Union, No. 30. Organized 1883; total membership, 40; average earnings per week, $10; average earnings per hour, 25c.; number of working hours first five days, 47½; number on Saturday, 9½; wages paid weekly; average number of days idle per member during year, 60; general cause of idleness, slack season; total number (union and non-union) employed at trade in locality, male, 50; female, 40; cash benefits, sickness, $5 per week; death, $100. President, Robert Kidner, York St., London; Corresponding Secretary, Jas. G. Hussey, 241 Colborne St., London; meets 3rd Monday in month.

Name,—Printing Pressmen and Assistants' International Union, No. 173. Organized October, 1908; total membership, 32; average earnings per week, $14 to $22; assistants, $7; average earnings per hour, 27c. and 13½c.; wages paid weekly; total number (union and non-union) employed at trade in locality, 42; cash benefits, death, $100; body incorporated and registered. President, Geo. Flory, Grosvenor St., London; Corresponding Secretary, A. G. Watson, 467 Simcoe St., London; meets first Saturday in month.

Name,—International Typographical Union, No. 133. Organized November, 1869; total membership, 58; average earnings per week, $15; average earnings per hour, 33 1-3c.; number of working hours first five days, news 40, job 43½; number on Saturday, news 8, job 4½; wages paid weekly; total number (union and non-union) employed at trade in locality, male, 125; female, 12; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union wages is $13 to $22 per week, non-union from $8 up; union hours, 48 per week; non-union, 54 per week; cash benefits; sickness, $5 per week; death, $75; superannuation, $4 per week; have technical school now in connection with International Union. President, A. C. Flowers, cor. William and Pall Mall Sts., London; Corresponding Secretary, Wm. O. Ruse, 14 Walnut St., London; meets 1st Saturday in month.

Name,—Boilermakers and Iron Ship Builders, and Helpers' International Union, No. 203. Organized May 1st, 1899, reorganized 1910; total membership, 18; average earnings per week, $18; average earnings per hour, 29c.; number of working hours first five days, 50; number on Saturday, 5 to 10; wages paid weekly, contract shop; monthly, R.R.; average number of days idle per member during year, 7; general cause of idleness, holidays or sickness; always enough work for supply of men; total number (union and non-union) employed at trade in locality, 32; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, 9c. per hour in favour of members; cash benefits, death, $100; out of work benefit, dues are remitted; body incorporated and registered. President, Wm. Stinson, 875 Elias St., London; Corresponding Secretary, Harry Nebbler, 811 Central Av., London; meets 2nd and 4th Wednesdays in month.

Name,—United Garment Workers of America, No. 33. Organized 1897; total membership, male, 5; female, 37; average earnings per week, male, $15; female, $8; average earnings per hour, male, 30¼c.; female, 17c.; number of working hours first five days, 42½; number on Saturday, 4; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, male, 160; female, 300; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, union shops work 46½ hours per week; non-union 49; union wages 30 per cent. higher. President,

Miss MacDonald, 179 John St., London; Corresponding Secretary, A. H. Carroll, 328 York St., London; meets 4th Friday in month.

Name,—United Brotherhood of Carpenters and Joiners, No. 1946. Organized November 1907; total membership, 35; average earnings per week, $13.36; average earnings per hour, 27c.; number of working hours first five days, 45; number on Saturday, 4½; wages paid weekly; number of days idle per member during year, about 30; general cause of idleness, inclement weather and dullness in building trade; total number (union and non-union) employed at trade in locality, 300; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, quality of workmanship demands better wages for union men; cash benefits, death, $200. President, R. A. Baker, 32 Emery St., London; Corresponding Secretary, Mosley Forsythe, 388 Ridout St., London; meets 2nd and 4th Tuesdays in month.

Name,—Journeymen Barbers' International Union, No. 366. Total membership, 40; average earnings per week, $12; number of working hours first five days, 50; number on Saturday, 13; wages paid weekly; general cause of idleness, public holidays; total number (union and non-union) of those engaged at trade in locality, 60; difference in wages and hours of labour of those employed at trade in locality between members and non-members of organization, about $2 per week in favour of union men. President, John Frezell, 611 Dundas St., London; Corresponding Secretary, J. E. Lecker, 713 Richmond St., London; meets 4th Monday in month.

Name.—International Alliance of Theatrical Stage Employees, No. 105. Organized November, 1902; total membership, 24; average earnings per week, $12.50; average earnings per hour, 25c.; number of working hours first five days, about 35; number on Saturday, 9; average number of days idle per member during year, from June 1st to September 1st; general cause of idleness, theatre closed; all are members of organization. President, S. Loughrey, 37 Beecher St., London; Corresponding Secretary, R. Whitton, 135 Albert St., London; meets 1st and 3rd Sundays in month.

Lindsay.

Name.—Brotherhood Locomotive Engineers, Hope Div., No. 174. Organized 1882; total membership, 55; average earnings per week, $25. President, Geo. Mursey, Melbourne St., Lindsay; Corresponding Secretary, Thos. Wilkinson, Cambridge St., Lindsay; meets 2nd and 4th Sundays in month.

Name,—Brotherhood of Locomotive Firemen and Enginemen. Total membership, 51; average earnings per week, $14; average earnings per hour, 20c.; number working hours first five days, 50; number on Saturday, 12; wages paid monthly; average number of days idle per member during year, 60; general cause of idleness, depression in traffic; total number (union and non-union) employed at calling in locality, 75; no difference in wages and hours of labour of those engaged at calling between members and non-members of organization; have reading room for members; body incorporated and registered. President, Chas. Golden, Box 212, Lindsay; Corresponding Secretary, Wm. Graham, Box 212, Lindsay; meets 2nd and 4th Sundays in month.

Midland.

Name.—International Longshoremen's Association, No. 199. Organized August 1, 1900; average earnings per hour, 30c.; average number of days idle per member during year, about 150; nature of work irregular, and no work during winter months; total number (union and non-union) employed at calling in local-

ity, about 60; non-union men receive the same wages as members when employed; body incorporated and registered. President, Geo. McMullen, Midland; Corresponding Secretary, D. A. Hall, Midland; meets 1st and 3rd Tuesdays in month.

Niagara Falls.

Name,—Amalgamated Society of Carpenters and Joiners, No. 797. Total membership, 14; average earnings per week, $16; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; cash benefits, sickness, $3 per week; out of work benefit, $2.50 per week. President, J. Holding, Niagara Falls; Corresponding Secretary, Wm. Broomhall, 45 McGrail Avenue, Niagara Falls; meets 1st and 3rd Fridays.

Name,—Journeymen Stonecutters of North America. Organized June 1, 1903; total membership, 50; average earnings per week, $24; average earnings per hour, 50c.; number of working hours first five days, 40; number on Saturday, 8; wages paid fortnightly; average number of days idle per member during the year, 75; cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, 70; death benefit, $100; strike pay, $5 and $7; no special work for members; not incorporated or registered. President, L. P. Anderson, St. Davids, Ont.; Corresponding Secretary, Chas. W. Anderson, 44 Benson St., Niagara Falls; meets 2nd and 4th Wednesdays.

North Bay.

Name,—International Brotherhood of Maintenance of Way Employees, No. 244. Organized 1903; total membership, 185; average earnings per week, $11.40; average earnings per hour, 19c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; total number (union and non-union) employed at calling in locality, 245; difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization, hours of labour same; 25c. per day less for non-union labour; body incorporated and registered. Intl. President, A. B. Lowe, St. Louis, Mo.; Corresponding Secretary, ————————; meets last Saturday in April, June, Aug., Octo., Dec. and Feb.

Name,—Brotherhood of R. Trainmen, No. 249. Organized April 5th, 1889; total membership, 170; wages paid monthly; total number (union and non-union) employed at calling in locality, 25; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, death, from $500 to $1,350; body incorporated and registered; approve of reading room for members. President, C. D. St. Germain, North Bay; Corresponding Secretary, Box 535, North Bay; meets 2nd and 4th Thursdays in month at 2 p.m. in I.O.O.F Hall.

Name,—Order of Railway Conductors, No. 242. Organized March 13th, 1889; total membership, ... President, R. Fligg, North Bay; Corresponding Secretary, H. A. Washburn, Box 602, North Bay; meets 2nd and 4th Mondays in month.

Name,—Order of Railway Telegraphers (Cobalt Division), No. 99. Organized July 1st, 1907; total membership, 62; average earnings per week, varies; average earnings per hour, varies; number of working hours first five days, 60 for operators, 40 for despatchers, work Sundays; number on Saturday, 12 for operators, 8 for despatchers, work Sundays; wages paid monthly; average number of days idle per member during year, after two years' service, 16; general cause of idleness, two

weeks holidays for operators, three weeks for despatchers after two years' service; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; total number (union and non-union) employed at calling in locality, 64; cash benefits, death, amount of insurance policy; out of work benefits, no guarantee of any benefits paid by the local division. President, J. H. Shibly, Haileybury; Corresponding Secretary, R. Workmen, Box 969, North Bay; meets at call of President.

Name,—Brotherhood of Railway Carmen of America, No. 192. Total membership, 80; average earnings per week, $12; average earnings per hour, 19c.; number of working hours first five days, 50; number on Saturday, 9 hours in winter, 5 in summer; wages paid monthly; average time idle per member during year, one week; cause of idleness, pleasure; total number employed at trade in locality, about 55; other 25 members work at outside points; no difference in wages or hours between members and non-members; no cash benefits; local subscription generally taken up for cases of sickness or death, if the case is needy; no special work for members; incorporated and registered. President, Wm. Legge, North Bay; Corresponding Secretary, H. G. Wright, Box 487, North Bay; meets 4th Friday.

Oshawa.

Name,—International Moulders' Union, No. 136. Organized July, 1852; total membership, 13; average earnings per week, $15; average earnings per hour, 25c.; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly and fortnightly; no idle days; total number (union and non-unon) employed at trade in locality, 25 non-union core-makers; no difference in wages and hours of labour of those employed at trade in locality between non-members and members of organization; cash benefits, sickness, $5.40 per week for 13 weeks; death, $100 to $200; out of work benefit, dues exempt for 13 weeks. President, Archie Robinson, Oshawa; Corresponding Secretary, R. H. Rogan, Box 144, Oshawa; meets 3rd Thursday in month.

Orangeville.

Name,—International Brotherhood of Maintenance of Way Employees, No. 214. Total membership, 150; average earnings per week, $10.50; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; general cause of idleness, reduction of staff in winter; total number (union and non-union) employed at calling in locality, 200; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, superannuation, $20 per month; body incorporated. President, R. McIntosh, Owen Sound; Corresponding Secretary, D. McDougall, Fergus; meets last Saturday in March, June, October and December.

Ottawa.

Name,—Brotherhood Locomotive Firemen and Enginemen (Electric City Lodge), No. 81. Organized Dec. 1st, 1873; total membership, 53; wages paid monthly; general cause of idleness, falling off of business during winter; total number (union and non-union) employed at calling in locality, 70; no difference in wages or hours of labour of those engaged at calling between members and non-

members of organization; cash benefits, per insurance policy; body is international. President, W. Landzmore, 103 Lees Avenue, Ottawa; Corresponding Secretary, J. Eldridge, 69 Frank Street, Ottawa; meets 2nd and 4th Thursdays in month.

Name,—Bricklayers' Union of Ontario, No. 7. Organized 1888; total membership, 97; average earnings per hour, 50c.; number of working hours first five days, 45; number on Saturday, 5; average number of days idle per member during year, 195; general cause of idleness, rain and winter weather; total number (union and non-union) employed at trade in locality, 145. President, Richard Reardon, 89 Lloyd Street, Ottawa; Corresponding Secretary, Alex. Findlay, jr., 1131 Wellington Street, Ottawa; meets second Monday in month.

Name,—Brotherhood of Railway Carmen of America (Ottawa Lodge), No. 230. Organized Feb. 17th, 1903; total membership, 23; average earnings per week, $10; average earnings per hour, 18c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; no idle days; total number (union and non-union) employed at calling in locality, male, 31; female, 2; no difference in wages or hours of labour of those engaged at calling in locality between members and non-members of organization; body incorporated and registered. President, Ed. Conway, 80 Merton Street, Ottawa; Corresponding Secretary, John L. Neill, 61 Pine Street, Ottawa; meets first and fourth Thursdays in month.

Name,—Bricklayers', Masons' and Plasterers' International Union, No. 14, Ontario. Total membership, 105; average earnings per week, $25; average earnings per hour, 50c.; wages paid fortnightly; average number of days idle per member during year, 125; general cause of idleness, bad weather, no work and scarcity of material; total number (union and non-union) employed at trade in locality, 120; difference in wages and hours of labour of those engaged in trade in locality between members and non-members of organization, from 10c. to 25c. per hour and four hours on Saturday in favour of members; cash benefits, $100 to $200. President, John Cameron, 74 Lloyd Street, Ottawa; Corresponding Secretary, M. Fleury, 214 Patterson Avenue, Ottawa; meets alternate Thursdays in month.

Name,—Operative Plasterers' International Association. Organized Nov. 28, 1908; total membership, 60; average earnings per week, $20; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 5; wages paid fortnightly; average number of days idle per member during year, 100; general cause of idleness, slackness of work; total number (union and non-union) employed at trade in locality, 100; difference in wages and hours of labour of those engaged in locality between members and non-members of organization, hours same, 5c. to 10c. per hour less for non-members; cash benefits, death, $50. President, J. R. Murphy, 385 Elgin Street, Ottawa; Corresponding Secretary, Alfred Hopkins, 297 Lisgar Street, Ottawa; meets Tuesday (fortnightly).

Name,—Amalgamated Association of Street and Electric Railway Employees of America, No. 279. Organized May 11th, 1906; total membership, 265; average earnings per week, $12.30; average earnings per hour, 20½c. for day men; number of working hours first five days, 50; number on Saturday, 10; wages paid fortnightly; number of days idle per member during year, 14; general cause of idleness, sleeping in; total number (union and non-union) employed at calling in locality, 316; no difference in wages and hours of labour of those engaged at calling in locality between members and non-members of organization; cash benefits, death, $100. President, James O'Brien, 211 Slater Street, Ottawa; Corresponding Secretary, Fred. Golding, 125 Pretoria Avenue, Ottawa; meets first and third Fridays in month.

Name,—United Brotherhood of Carpenters and Joiners of America. Organized Feb., 1905; total membership, 70; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly and fortnightly; average number of days idle per member during year, 30; general cause for idleness, climatic conditions; total number (union and non-union) employed at trade in locality, 400; cash benefits, death, $200; $50 for wife's death; and disability, $400. President, L. Blouin, 38 Sterling Ave., Ottawa; Corresponding Secretary, Emery Belair, 267 Clarence Street, Ottawa; meets 1st and 3rd Wednesdays in month.

Name,—Painters', Decorators' and Paperhangers' International Union, No. 200. Organized March 15, 1887; total membership, 65; average earnings per week, $13.50; average earnings per hour, 27c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly and fortnightly; average number of days idle per member during year, 30; general cause of idleness, winter weather and lack of building operations; total number (union and non-union) employed at trade in locality, about 200; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, non-members work 60 hours per week and receive from 20c. to 25c. per hour; cash benefits, death, from $50 to $300; body incorporated. President, H. Herbert, 40 Turner Street, Ottawa; Corresponding Secretary, E. C. Brandt, 57 Bayswater Avenue, Ottawa; meets first and third Tuesdays in month.

Name,—International Association of Machinists, No. 412. Organized 1904; total membership, 60; average earnings per week, $14; average earnings per hour, 23c.; number of working hours first five days, 50; number on Saturday, 9; wages paid fortnightly; average number of days idle per member durng year, 30; general cause of idleness, slackness of work; total number (union and non-union) employed at trade in locality, 200; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, non-members receive 17c. to 20c. per hour; cash benefits, sickness, dues remitted; death, $250 to $500; superannuation, $5 to $10; out of work benefit, strike, married men receive $8 per week, single men $7 per week; monthly journal contains educational and technical course; body incorporated and registered. President, E. Nusamun, 65 Anderson Street, Ottawa; Corresponding Secretary, Henry E. Roche, 75 Elm Street, Ottawa; meets first and third Fridays in month.

Name,—International Moulders' Union, No. 280. Organized January 10, 1900; total membership, 45; average earnings per week, $16; average earnings per hour, 26½c.; number of working hours first five days, 50; number on Saturday, 9; summer months, 5; wages paid fortnightly; general cause of idleness, depression in trade; total number (union and non-union) employed at trade in locality, 65; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; non-members receive from the scale down to 10c., 15c. and 25c. less than members; cash benefits, sickness, $5.40 per week; death, $150; out of work benefit, dues remitted. President, Thomas Stanley, 55 Ottawa Street, Ottawa; Corresponding Secretary, J. E. Bedard, 155 Alma Street, Ottawa; meets first and third Wednesdays in month.

Name,—Brotherhood of Railway Conductors (Randolph Division), No. 29. Organized 1881; total membership, 90; average earnings per week, paid by mileage; number of working hours first five days, uncertain; wages paid monthly; general cause of idleness, slackness of traffic; total number (union and non-union) employed at calling in locality, 125; no difference in wages and hours of labour of

those engaged at calling in locality between members and non-members of organization; cash benefits, death, $1,000, $2,000 and $3,000. President, D. A. Howard, 784 Somerset Street, Ottawa; Corresponding Secretary, J. B. Morris, 305 Bronson Avenue, Ottawa; meets second and fourth Sundays in month.

Name,—Brotherhood of Railroad Trainmen; total membership, 130; average earnings per week, paid on mileage basis; average earnings per hour, conductors, $2.75; brakemen, $1,80 per 100 miles; ten hours or 100 miles constitute one day; wages paid monthly; average number of days idle per member during year, one-fifth membership idle about five months; general cause of idleness, traffic light during winter months; total number (union and non-union) employed at calling in locality, 125; no difference in wages and hours of those engaged at calling in locality between members and non-members of organization; cash benefits, death, $500, $1,000 and $1,350; body incorporated and registered. President, John Maloney, 62 Henderson Avenue, Ottawa; Corresponding Secretary, H. H. Brown, 539 Lyon Street, Ottawa; meets alternate Sundays in month, at 2 p.m.

Name,—Stereotypers' and Electrotypers' International Union, No. 50. Organized October 2, 1900; total membership, 10; average earnings per week, $16; average earnings per hour, 33⅓c.; number of working hours first five days, 43; number on Saturday, 5; wages paid fortnightly; no idle days during year; all are union in locality; cash benefits, death, $60; body incorporated and registered. President, Thomas Hulme, 309 Bell St., Ottawa; Corresponding Secretary, W. R. Hague, 139 Henderson Avenue, Ottawa; meets 1st Saturday in month.

Name,—Brotherhood Railroad Trainmen. Organized September 9, 1887; total membership, 182; cash benefits, death, beneficiary department; body incorporated. President, A. E. Salman, 49 Rochester St., Ottawa; Corresponding Secretary, Wm. A. Perry, No. 1 Elm St., Ottawa; meets 1st and 3rd Sundays in month.

Name,—Stonecutters' International Association. Organized December 5, 1853; total membership, 100; average earnings per week, $19; average earnings per hour, 44c.; number of working hours first five days, 40; number on Saturday, 4; wages paid fortnightly; number of days idle per member during year, 150; general cause of idleness, no work during winter months; total number (union and non-union) employed at trade in locality, 148; difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization, 5c. to 15c. per hour less for non-members; cash benefits, death, $100; body incorporated and registered. President, D. Nelson, Gladstone Avenue, Ottawa; Corresponding Secretary, J. W. Thomson, 274 Turner St., Ottawa; meets 2nd and 4th Wednesdays in month.

Name,—National Trades and Labour Council. Organized October 4, 1907; number of working hours first five days, 48 to 50 hours per week; wages are generally paid weekly; average number of days idle per member during year, building trades through climatic conditions lose from four to six weeks; difference in wages and hours of labour between members and non-members of organization; generally speaking, union men command a higher wage, non-unionists for the most part being incompetent or work in petty establishments; principal object is organization and to uphold the labour movement generally. President, H. H. Cairns, 409 Rideau St., Ottawa; Corresponding Secretary, S. Kennedy, 178 Avon Lane, New Edinboro'; meets 1st and 3rd Thursdays in month.

Name,—International Steel and Copper Plate Printers' Union, No. 6. Organized 1899; total membership, 32; number of working hours first five days, 42½; number on Saturday, 4½; wages paid weekly; total number (union and non-union) employed at trade in locality, 35; no difference in wages and hours of

labour of those engaged at trade in locality between members and non-members of organization; cash benefits, death, $50. President, M. J. Kelly, 63 Bell St., Ottawa; Corresponding Secretary, Edward J. Lane, 229 Lisgar St., Ottawa; meets 1st Friday in month.

Name,—Sheet Metal Workers' International Alliance, No. 47. Organized September, 1907; total membership, 65; average earnings per week, $16; average earnings per hour, 28½c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly and fortnightly; no idle time; total number (union and non-union) employed at trade in locality, 80; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits, death, $100; in case of strike or lockout members in good standing receive $5 per week after two weeks; body incorporated and registered. President, J. W. Morgan, 30 Sherbrooke Avenue, Ottawa; Corresponding Secretary, J. M. Bond, 86½ Third Avenue; meets 1st and 3rd Wednesdays in month.

Name,—International Typographical Union, No. 102. Organized 1867; total membership, male, 210; female, 7; average earnings per week, male, $16; female, $16; number of working hours first five days, 43; number on Saturday, 5; wages paid part weekly and part fortnightly; general cause of idleness, temporary slackness; total number (union and non-union) employed at trade in locality, male, 350; female, 12; no difference in wages and hours of labour of those engaged at trade in locality between members and non-members of organization; cash benefits, sickness, $4 per week; death, $75; superannuation, $4 per week after twenty years continuous membership, and sixty years of age; body registered. President, Michael Power, 283 Kent Street, Ottawa; Corresponding Secretary, Wm. C. Blount, Box 491, Ottawa; meets first Saturday in month.

Name,—International Alliance of Theatrical Stage Employees. Local 95. Organized 1902; total membership, 48; average earnings per week, $15; average number of days idle per member during year, 60; general cause for idleness, close theatres; all are members of organization in locality. President, J. Thibault, 249 Albert Street, Ottawa; Corresponding Secretary, H. G. Haig, 358 Albert Street, Ottawa; meets first Monday in month at 2.30 p.m.

Name,—International Printing Pressman's Union, No. 5. Organized January, 1879; total membership, 49; average earnings per week, $17.50; average earnings per hour, 36c.; number of working hours first five days, 42½; number on Saturday, 5; wages paid weekly; no idle time. President Fred. Thomas, 565 Laren St., Ottawa; Corresponding Secretary, 327 Bell Street, Ottawa; meets second Monday in month.

Name,—Hodcarriers' and Builders' Labourers' Union, No. 32. Organized 1887; total membership, 200; average earnings per week, $12.50; number of working hours first five days, 45; number on Saturday, 5; wages paid fortnightly; general cause of idleness, inclement weather; 5c. per hour difference in favour of members of organization; cash benefits, death, one year membership, $50; second year membership, $100; body incorporated and registered. President, James Abbott, Ottawa; Corresponding Secretary, M. J. O'Connor, 144 Eccles Street, Ottawa; meets second and fourth Tuesdays in month.

Name,—Ottawa Pressfeeders and Assistants, No. 9. Organized May 29th, 1909; total membership, 79; average earnings per week, $7, $9 and $11.25; average earnings per hour, 14½c., 18¾c., 23½c.; number of working hours first five days, 43; number on Saturday, 5; wages paid weekly or fortnightly; death benefits,

$100; no special work for members; not incorporated or registered. President, W. A. Jacques, 159 Freel Street; Corresponding Secretary, A. Scatthorpe, 87 Ann Street, Hull, Quebec; meets second Monday.

Name,—International Brotherhood of Teamsters, No. 192, Cab Drivers. Organized, July 26, 1908; total membership, 40; average earnings per week, $10; number of working hours first 5 days, 12; wages paid weekly; total number (union and non-union) employed at calling in locality, 200; no difference in wages or hours between members and non-members; sick benefits, $4 per week; death benefits, $1 each member; no special work for members; body incorporated. President, C. Kelly, Florence Street, Ottawa; Corresponding Secretary, A. Pinaud, 141 Dalhousie Street; first Sunday.

Name,—Butchers' and Meat Cutters' Union, No. 464. Organized April 1908; total membership, 40; average earnings per week, $12; number of working hours first five days, 55; number on Saturday, 14; wages paid weekly; average number of days idle per member during year, 50; cause of idleness, slack trade; total number (union and non-union) employed at trade in locality, 300; union men receive higher wages than non-union; no cash benefits; no special work for members; not incorporated or registered. President, Jas. Usher, 231 Arlington Street; Corresponding Secretary, Thos. Schofield, Ottawa; meets first and second Wednesdays.

Name,—International Brotherhood of Carpenters and Joiners, No. 93. Organized, 1908; total membership, 225; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid fortnightly; average number of days idle per member during year, 30; cause of idleness, slackness of work; death benefits, $200; no other cash benefits. President, ...; Corresponding Secretary, E. Belairs, 263 Clarence Street; meets first and third Wednesdays.

Name,—United Brotherhood of Leather Workers on Horse Goods, No. 162. Organized March 1907; total membership, 65; average earnings per week, $11; average earnings per hour, 17½c.; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; total number employed at trade in locality, 65 union, 10 non-union; no difference in wages and hours between members and non-members; sick benefits, $5 per week; death benefits, $40 to $100; no special work for members; not incorporated or registered. President, A. W. Chester, 126 Lyon Street; Corresponding Secretary, Patrick Burk, 126 Lyon Street; first and third Tuesdays.

Name,—Plumbers' and Steam Fitters' Union, No. 71. Organized, Sept. 30, 1897; total membership, 135; average earnings per week, $20; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly or fortnightly; average number of days idle per member during year, 10; cause of idleness, no work; 95 per cent. in union; sick benefits $5 per week; death benefits, $100; no special work for members; not incorporated or registered. President, Jos. Hurtubese, 254 Water Street; Corresponding Secretary, Chas. Smith, 504 McLeod Street; meets second and fourth Wednesdays.

Name,—International Hodcarriers' and Plasterers' Labourers' Union, No. 235. Organized May, 1909; total membership, 50; average earnings per week, $12.50; average earnings per hour, 25c.; number of working hours first five days, 45; number on Saturday, 5; wages paid fortnightly; average number of days idle per member during year, 12; cause of idleness, weather and slack trade; total number (union and non-union) employed at trade in locality, 75; union men get 25c., non-union men from 20c. to 22½c.; death benefits, $50 to $100; no special work for

members; body registered. President, A. Bethell, Westbro P.O.; Corresponding Secretary, H. Bassam, 444 Gladstone Avenue; meets second and fourth Thursdays.

Name,—International Hodcarriers' and Builders' Labourers' Union, No. 32. Total membership, 195; average earnings per week, $12; average earnings per hour, 25c.; number of working hours first five days, 50; number on Saturday, 5; wages paid weekly; idle in winter months; difference of 5c. to 10c. per hour between members and non-members; death benefits, $100; no special work for members; body incorporated. President, G. Howlett, 310 Gladstone Avenue; Corresponding Secretary, C. Plumb, 310 Gladstone Avenue; meets alternate Tuesdays.

Name,—Gas-Stokers' Union. Total membership, 16; average earnings per week, $10; working hours, 12 a day for 7 days; wages paid fortnightly; sick benefits, 75c. a day after 7 days. President, William Baxter, Ottawa; Corresponding Secretary, P. B. Buchell, Ottawa.

Name,—Amalgamated Society of Carpenters and Joiners, No. 824. Organized June, 1860; total membership, 32; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid fortnightly; average days idle per member during year, 14; general cause of idleness, inclement weather; total number (union and non-union) employed at trade in locality, about 700; difference in wages and hours of labour of those employed in trade in locality between members and non-members of organization, about 10c. per hour in wages; cash benefits, lack of employment, $2.50 per week; sickness, $3 per week; death, $60; superannuation, $1.75 per week; body incorporated. President, Chas. Banks, Bank Street, Ottawa; Corresponding Secretary, Geo. Wild, 86 Hamilton Avenue, Ottawa; meets first and third Thursdays.

Name,—Bricklayers' and Masons' International Union. Organized April, 1889; total membership, 25; average earnings per week, $21.60; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, 90; cause of idleness, snow and bad weather; total number (union and non-union) employed at trade in locality, 150; difference in wages between members and non-members, 10c. per hour; no cash benefits; no special work for members; not incorporated or registered. President, Chas. Leathbridge, Sixth Avenue West; Corresponding Secretary, Sixth Avenue West; meets every Wednesday.

Name,—Journeymen Stonecutters' Association of North America. Organized January, 1902; total membership, 6; average earnings per week, $19.20; average earnings per hour, 40c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; total number (union and non-union) employed at trade in locality, 8; union men work 8 hours, non-union, 10; union men get 40c. per hour, non-union 25c.; death benefits, $100; no other cash benefits; no special work for members. President, David Fraser, 345 Fifth Street East; Corresponding Secretary, Edw. Gaskell, 1132 Fourth Avenue East; meets second Fridays.

Palmerston.

Name,—Order of Railway Conductors, No. 492. Organized May 20, 1906; total membership, 17; average earnings per week, $15; average earnings per hour, 29c.; number of working hours first five days about 40; number on Saturday, about 3; wages paid monthly; average number of idle days per member during year, 105; cause of idleness, slackness of business; total number (union and non-union) employed at calling in locality, 36; C. P. R. pay some men as high as 42c. per hour;

no cash benefits; no special work for members; incorporated and registered. President, A. B. Garretson, Cedar Rapids, Iowa; Corresponding Secretary, P. W. Cordingly, Box 4, Palmerston; meets second Sundays.

Name,—Brotherhood of Locomotive Firemen and Enginemen, No. 781. Organized 1883; total membership, 37; wages paid monthly; total number (union and non-union) employed at calling in locality, about 85; no difference in wages and hours between members and non-members; sick benefits, $3 per week; death benefits from $500 to $3,000; special work for members. President, Thos. A. Smith, Palmerston; Corresponding Secretary, H. W. Ladd, Palmerston.

PETERBOROUGH.

Name,—Journeymen Barbers' International Union of America, No. 402. Organized July, 1902; total membership, 25; average earnings per week, $12; number of working hours first 5 days, 50; number on Saturday, 13; wages paid weekly; total number (union and non-union) employed at trade in locality, 32; no difference in wages and hours between members and non-members; hours fixed by city by-law; sick benefits, $5 per week; death benefits $75 to $500; no special work for members; body incorporated. President, J. E. Kelly, 164 Simcoe St.; Corresponding Secretary, M. H. Gainey, 423 George St.; meets third Monday.

Name,—International Typographical Union, No. 248. Organized Jan. 4th, 1902; total membership, 40; average earnings per week, $12; average earnings per hour, 25c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; total number (union and non-union) employed at trade in locality, 40; death benefits, $75; international course in printing for members; incorporated or registered. President, E. H. Bartlett, "Times" Office; Corresponding Secretary, G. A. Harmon, 573 Rogers St.; meets 2nd Saturday.

Name,—Journeymen Stonecutters' International Union. Organized 1880; total membership, 5; average earnings per week, $21.60; average earnings per hour, 45c.; number of working hours first five days, 40; number on Saturday, 8; wages paid fortnightly; total number (union and non-union) employed at trade in locality, 5; death benefits, $100; no special work for members. President, I. M. Halladay, McDonnel St.; Corresponding Secretary, Geo. Wooton, 280 McDonnel St.

Name,—Bricklayers' and Masons' International Union, No. 17. Organized Nov. 9th, 1901; total membership, 31; average earnings per week, $19.20; average earnings per hour, 40c. number of working hours first five days, 40; number on Saturday, 8; wages paid fortnightly; total number employed at trade in locality, union 31, non-union 9; non-union men work an hour a day longer than union men; death benefits, $100 to $200; no other cash benefits; no special work for members. President, Wm. B. Fredericks, Harvey St.; Corresponding Secretary, Wm. Stevens, Box 778; 2nd and 3rd Tuesdays.

Name,—Brotherhood of Painters, Decorators, and Paperhangers, No. 379. Organized May 19th, 1909; total membership, 9; average earnings per week, $13.50; average earnings per hour, 25c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; total number (union and non-union) employed at trade in locality, 9 union, 12 non-union; difference in wages, union 25c., non-union 15c. to 17c. per hour; no cash benefits; no special work for members; not incorporated, but registered. President, Thos. Embury, 344 Simcoe St., Peterborough; Corresponding Secretary, Wm. Thomas, 501 Donegal St., Peterborough; meets 1st and 3rd Mondays.

Port Arthur.

Name,—Wood, Wire, and Metal Lathers' International Union, No. 223. Organized 1904; total membership, 17; average earnings per week, $25; average earnings per hour, 55c.; number of working hours first five days, 40c.; number on Saturday, 4; wages paid fortnightly; no difference in wages or hours between members and non-members; death benefits, $100 from head-quarters, when member for one year. President, Fred. M. Mayotte, 307 South Mark St., Fort William; Corresponding Secretary, John W. Archer, 36 Algoma St., Port Arthur; meets 1st and 3rd Thursdays.

Name,—United Association of Plumbers, Steam and Gas Fitters, No. 378. Reorganized July, 1910; number of working hours first five days, 45; number on Saturdays, 9; wages paid fortnightly and monthly; no difference in wages or hours between members and non-members; sick benefits, $5 per week; death benefits, $100; no special work for members; not incorporated or registered. President, L. McArthur, Jean St., Port Arthur; Corresponding Secretary, C. J. Vincent, 36 Algoma St. South, Port Arthur; meets 2nd and 4th Fridays.

Name,—International Association of Machinists, No. 820. Organized April, 1908; total membership, 25; average earnings per week, $20; average earnings per hour, 35c.; number of working hours first five days, 45 or 50; number on Saturday, 5 or 10; wages paid weekly or monthly; no idle days; total number (union and non-union) employed at trade in locality, 40; difference in wages between members and non-members, 12½c. per hour; death benefit, $50 to $100; superannuation, $50 to $200; out of work benefit dues allowed; no special work for members; not incorporated or registered. President, Geo. Stark, 43 Court St., Port Arthur; Corresponding Secretary, Andrew Boyd, 368 Wiley St., Port Arthur; meets 1st Thursday.

Name,—United Brotherhood of Carpenters and Joiners of America, No. 285. Organized March, 1906; total membership, 40; average earnings per week, $20; average earnings per hour, 35c.; number of working hours first five days, 50; number on Saturday, 10; wages paid fortnightly; average time idle per member during year, 6 weeks; cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, 150; difference in wages between members and non-members, 2½c. to 5c.; death benefits, $200 to $400; no special work for members. President, Jas. A. Dunbar, 120 Peter St., Port Arthur; Corresponding Secretary, A. F. Manchee, 116 Jean St., Port Arthur; meets 1st and 3rd Mondays.

Name,—Bartenders' International League, No. 757. Total membership, 40; average earnings per week, $15; number of working hours first five days, 85; number on Saturday, 13; wages paid monthly; total number employed at calling in locality, 40 union, 3 non-union; non-union wages, from $5 to $12; sick benefit, $5 and doctor; death benefits, $100; reading and club room for members; incorporated and registered. President, H. J. Cassidy, Port Arthur; Corresponding Secretary, Wm. Robinson, Campbell Block, Port Arthur; meets 1st Sunday.

Name,—Amalgamated Society Carpenters and Joiners. Organized Feb. 27, 1908; total membership, 48; average earnings per week, $21; average earnings per hour, 35c.; number of working hours first five days, 50; number on Saturday, 10; wages paid fortnightly; average number of days idle per member during year, 30; cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, 400; no difference in wages and hours between members and non-members; lack of employment benefits, $2.50 per week; sick benefits, $3 per

week; out of work benefits, $2.50 per week; no special work for members; body registered. President, J. Fearon, 328 St. Vincent St., Port Arthur; Corresponding Secretary, Sid. Wilson, 96 Brent St., Port Arthur; meets 1st and 3rd Thursdays.

Name,—Order of Railway Conductors, No. 536. Organized June 14, 1908. Total membership, 25; average earnings per week, $40; average earnings per hour, 39c.; working hours vary; wages paid monthly; no idle days; total number (union and non-union) employed at trade in locality, 30; no difference in wages and hours between members and non-members; no cash benefits; no special work for members; incorporated and registered. President, W. J. Garettson, Cedar Rapids, Iowa; Corresponding Secretary, E. McGeagh, 97 Algoma St. South, Port Arthur; meets 2nd and 4th Mondays.

Name,—Typographical Union, No. 515. Organized Oct. 1st, 1907; total membership, 18; average earnings per week, $18; average earnings per hour, 38c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; total number employed at trade in locality, 18; death benefits, $75; superannuation, $4.50 weekly; body registered. President, E. G. Price, Port Arthur; Corresponding Secretary, H. E. Temple, Box 428, Port Arthur; meets 1st Saturday.

Name,—Journeymen Stonecutters of North America. Total membership, 32; average earnings per week, $24.40; average earnings per hour, 55c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly; average number of idle days per member during year, 100; cause of idleness, winter weather; death benefits, $100; no special work for members; incorporated and registered. President, Robt. Wishart, 306 Bay St., Port Arthur; Corresponding Secretary, Duncan Eaglesome, 306 Bay St., Port Arthur; meets 2nd Tuesday.

Port Colborne.

Name,—United Brotherhood of Carpenters and Joiners of America, No. 1168. Organized Jan. 9th, 1902; total membership, 34; average earnings per week, $13.50; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly, fortnightly, or monthly; average time idle per member during year, two months; cause of idleness, stormy weather; total number (union and non-union) employed at trade in locality, 34 union, 6 non-union; non-union men work one hour more than union men; death benefits, $200; no other cash benefits; no special work for members. President, Louis White, Humberstone, Ont.; Corresponding Secretary, Wm. F. Cook, Port Colborne; meets 1st and 3rd Mondays.

Port Hope.

Name,—International Moulders' Union, No. 189. Organized, 1881; total membership, 67; average earnings per week, about $24; average earnings per hour, 50c.; number of working hours first five days, 50; number on Saturday, 10; wages paid fortnightly; average number of days idle per member during year, 35; cause of idleness, sickness, shut down, lack of orders, and stock-taking; total number (union and non-union) employed at trade in locality, 69; no difference in wages or hours between members and non-members; sick benefits, $5.40 per week for 13 weeks; death benefits, $100 to $200; no superannuation; out of work benefits, dues for 13 weeks; no special work for members; not incorporated or registered. President, Walter Thomas, Port Hope; Corresponding Secretary, Ch. A. McElroy, Box 201, Port Hope; meets 2nd and 4th Mondays.

Ridgemount.

Name,—Order of Railway Telegraphers, No. 16. Organized Dec. 22nd, 1894; total membership, male 392, female 4; average earnings per week, $17.50; average earnings per hour, 17½c.; number of working hours first five days, 60; number on Saturday, 12; Sundays, 12 hours; wages paid monthly; average number of days idle per member during year, 15; cause of idleness, taking holidays to recruit; total number employed at calling in locality, male, 16 union, 3 non-union, female 1; no difference in wages or hours between members and non-members; death benefits according to insurance; no other cash benefits; no special work for members; not incorporated or registered. President, J. C. Culkins, Albion, Mich.; Corresponding Secretary, J. H. Staley, Ridgemount; meets every 3rd Monday.

St. Catharines.

Name,—Amalgamated Society of Carpenters and Joiners, No. 61. Organized June 4th, 1864; total membership, 7; average earnings per week, $14; average earnings per hour, 33c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; no idle days; total number employed at trade in locality, 140, all union; lack of employment benefit, $2.50 per week; sick benefits, $3 per week; death benefits, $60; superannuation, $2.50 per week; tool insurance value $100; accident benefit, $500; no special work for members. President and Secretary, W. Nicholson, 19 Wiley St., St. Catharines; meets alternate Thursdays.

Name,—United Brotherhood of Carpenters and Joiners of America, No. 38. Organized Feb. 22nd, 1883; total membership, 70; average earnings per week, $15; average earnings per hour, 33c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly or fortnightly; number of days idle per members during year, 30; cause of idleness, inclement weather; total number (union or non-union) employed at trade in locality, 75; members get 8c. per hour more than non-members, hours the same; sick benefits voluntary; death benefits $200; wife's death, $50; disability, $300 to $400; provision for members for debates on labour topics and problems in the trade; not incorporated or registered. President, R. H. Bradley, 138 Queenston St., St. Catharines; Corresponding Secretary, Jas. Carty, 19 Cherry St., St. Catharines; meets every Friday.

Name,—Typographical Union, No. 416. Organized 1901; total membership, 18; average earnings per week, $15; average earnings per hour, 33c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, 18; death benefits, $75; no other cash benefits; no special work for members; not incorporated or registered. President, Jas. Matthewson, "Standard" Office, St. Catharines; Corresponding Secretary, Bert Gadsby, 16 Haynes Ave., St. Catharines; meets last Monday.

Name,—Bricklayers', Masons', and Plasterers' International Union, No. 4. Organized April 1st, 1882; total members, 52; average earnings per week, $14; average earnings per hour, 45c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 125; cause of idleness, lack of work and weather; total number (union and non-union) employed at trade in locality, 52. President, A. G. Brown, 119 Geneva St., St. Catharines; Corresponding Secretary, C. G. Paley, 48 Louisa St., St. Catharines; meets 1st and 3rd Tuesdays.

Name,—Plumbers' and Steamfitters' International Union, No. 244. Organized April 1, 1901; total membership, 15; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; average time idle per member during year, 3 months; cause of idleness, depression of trade; total number (union and non-union) employed at trade in locality, 20; difference in wages between members and non-members, 10c. per hour; sick benefit, $5 a week; death benefit, $100; superannuation, 30 years consecutive full membership, $300; out of work benefits, dues paid; no special work for members. President, Richard English, 119 Geneva St., St. Catharines; Corresponding Secretary, Harry Oliver, 31 Beech St., St. Catharines; meets every Thursday.

Name,—Painters, Decorators, and Paperhangers of America, No. 407. Organized Aug. 1st, 1901; total membership, 31; average earnings per week, $13; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; total number (union and non-union) employed at trade in locality, 40; no difference in wages or hours between members and non-members; death benefits $100 to $300, according to length of membership; no special work for members. President, E. E. A. Day, 63 George St., St. Catharines; Corresponding Secretary, Wm. D. Outram, 30 Nelson St., St. Catharines; meets 2nd and 4th Wednesdays.

Name,—Barbers' Union, No. 1. Organized Oct. 1st, 1886; total membership, 22; average earnings per week, $12; number of working hours first five days, 60; number on Saturday, 15; wages paid weekly; total number (union or non-union) employed at trade in locality, 25; sick benefits, $3 per week; death benefit, $25; not incorporated. President, Y. M. Bessey, St. Paul St., St. Catharines; Corresponding Secretary, Adam Haynes, 293 St. Paul St., St. Catharines; meets 1st and 3rd Mondays.

Name,—Journeymen Tailors' Union of America, No. 235. Organized 1896; average earnings per week, male $12, female $6; average earnings per hour, male 25c., female 15c.; number of working hours first five days, 50; number on Saturday, 10; wages paid weekly; average number of days idle per member during year, 60; cause of idleness, slack season; total number (union and non-union) employed at trade in locality, male 27, female 16; union men have slightly higher wages than non-union; sick benefits, $5 per week; death benefits, $100 for four years' membership; no special work for members; not incorporated or registered. President, S. Rogers, 159 Church Street, St. Catharines; Corresponding Secretary, Vernon Fullerton, 140 Queenston St., St. Catharines; meets 1st Monday.

Name,—International Cigarmakers' Union, No. 140. Organized Aug. 24th, 1881; total membership, male 25, female 1; average earnings per week, male or female, $12; average earnings per hour, 25c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; average number of days idle per member during year, 20; cause of idleness, reduction in hotel licenses; difference in wages and hours between members and non-members, about $4, and at least 2 hours; sick benefits, $5 per week; death benefits, $50 to $550; out of work benefits, $3 per week; no special work for members; body registered. President, Wilfred Haynes, St. Catharines; Corresponding Secretary, Leo T. Coyle, 3 Court St., St. Catharines; meets first Monday.

St. Mary's.

Name,—Journeymen Stonecutters' Association. Organized 1905; total membership, 6; average earnings per week, $21.60; average earnings per hour, 45c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; death benefits, $100; no other cash benefits; no special work for members. President, Jim Clyde, St. Mary's; Corresponding Secretary, Wm. H. McCauley, St. Mary's; meets first and third Tuesdays.

St. Thomas.

Name,—Journeymen Tailors' Union of America No. 141. Organized 1890; total membership, male 18, female 22; average earnings per week, male $12, female $6.50; number of working hours first five days, 50 to 60; number on Saturday, 10 to 12; average number of days idle per member during year, 60; cause of idleness, slackness of trade; total number (union and non-union) employed at trade in locality, male 24, female 32; union members receive from $2 to $5 per week more than non-union; sick benefits, $5 per week for 10 weeks; death benefits $25 to $100 according to length of membership; no special work for members. President, John R. Snell, 9 Isabel Street, St. Thomas; Corresponding Secretary, Wm. Abernethy, 32 Ross Street, St. Thomas; meets fourth Monday.

Name,—Order of Railway Conductors, No. 13. Organized August, 1880; total membership, 100; average earnings per week, $20; wages paid monthly; no idle days; total number (union and non-union) employed at calling in locality, 125; no difference in wage and hours between members and non-members; death benefits, amount of insurance; no other cash benefits; no special work for members; body incorporated. President, Geo. Hayes, 18 Wilson Avenue, St. Thomas; Corresponding Secretary, 50 Gladstone Avenue, St. Thomas; second and fourth Sundays.

Name,—International Association of Machinists, No. 294. Re-organized July 18, 1907; total membership, 150; average earnings per week, $14; average earnings per hour, 29c.; number of working hours first five days, 45; number on Saturday, 9; wages paid monthly; average number of days idle per member during year, 40; cause of idleness, lack of business and reducing expenses; total number (union and non-union) employed at trade in locality, 10; non-union men work 10 hours, union men, 9; death benefits, $500; superannuation, $300; strike pay, $8 per week; special work for members; incorporated and registered. President, Robt. Verner, 7 Wilson Avenue, St.Thomas; Corresponding Secretary, J. J. J. Stewart, 56 Redan Street, St. Thomas; meets first and third Tuesdays.

Name,—Bricklayers', Masons' and Plasterers' Union, No. 8. Total membership, 12; average earnings per week, $20; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average time idle per member during year, two months; cause of idleness, cold weather; total number (union and non-union) employed at trade in locality, 18; difference in wages between members and non-members, 5c. to 10c. per hour; no cash benefits; no special work for members; incorporated and registered. President, John Anderson, Miller Street, St. Thomas; Corresponding Secretary, Orlando J. Beal, 83 Erie Street, St. Thomas; meets second and fourth Wednesdays.

Name,—Brotherhood of Railway Trainmen, No. 47. Organized April 27, 1887; total membership, 350; average earnings per month, $70 to $115; wages paid monthly; no difference in wages or hours between members and non-members; total

number (union and non-union) employed at calling in locality, 100; death benefits, $500 to $1,350; no special work for members; incorporated and registered. President, H. E. Hookway, 638 Talbot Street, St. Thomas; Corresponding Secretary, Herbert Sharp, 2 John Street, St. Thomas; meets every Monday.

Name,—Association of Street and Electric Railway Employees, No. 486. Organized Sept., 1908; total membership, 15; average earnings per week, $11.50; average earnings per hour, 18c.; number of working hours first five days, 50; number on Saturday, 10; wages paid weekly; total number (union and non-union) employed at calling in locality, male 30, female 1; no difference in wages and hours between members and non-members; death benefits, $100 for members in good standing for one year; no special work for members; not incorporated or registered. President, M. R. Coop, Talbot Street West, St. Thomas; Corresponding Secretary, Ed. Potts, Street Railway, St. Thomas; meets one Sunday in month.

Sarnia.

Name,—Order of Railway Conductors, No. 189. Organized April 27, 1886; total membership, 44; average earnings per week, $22; wages paid monthly, according to mileage run; total number (union and non-union) employed at trade in locality, 55; no difference in wages or hours between members and non-members; death benefits, $1,000 to $3,000, according to insurance; pensions by G. T. R. at 65 years; have benefit of Railway Y. M. C. A.; incorporated and registered. President, W. J. Cossey, 390 Brock Street, Sarnia; Corresponding Secretary, H. Bell, 288 Campbell Street, Sarnia; meets first and third Tuesday.

Name,—Brotherhood of Locomotive Engineers, No. 240. Total membership, 80; average earnings per week, $25; average earnings per hour, yard work, 31c., road work by mileage; working hours, 12 per day in yard; wages paid monthly; total number (union and non-union) employed at calling in locality, 100; no difference in wages and hours between members and non-members; sick benefits, 50c. per day after third day; death benefits, $1,500 to $4,500; old age pension G. T. R.; no special work for members; not incorporated or registered. President, Jas. S. Crawford, 111 Brock Street, Sarnia; Corresponding Secretary, Jas. Copeland, 140 Savoy Street, Sarnia; meets alternate Thursdays.

Name,—Journeymen Barbers' International Union, No. 467. Organized Nov. 26, 1902; total membership, 14; average earnings per week, $12; average earnings per hour, 19 1-3c.; number of working hours first five days, 48; number on Saturday, 14; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, 23; non-union men work 3 hours per day longer and get $3 per week less than union men; sick benefits $5 per week; death benefits $40 to $700; no other cash benefits; no special work for members. President, Wm. Lumby, 203 Christina Street, Sarnia; Corresponding Secretary, Wm. Knight, 140 Cromwell Street, Sarnia; meets first Tuesday.

Sault Ste. Marie.

Name,—Brotherhood of Railway Trainmen, No. 611. Total membership, 26; average earnings per hour, 17½c. and 23c. for brakesmen, 30c. for conductors; number of working hours first five days, 60; number on Saturday, 12; wages paid monthly; total number (union and non-union) employed at calling in locality, 35; no cash benefits; no special work for members; incorporated and registered. Presi-

dent, L. B. Shank, Sault Ste. Marie; Corresponding Secretary, A. T. Goodell, Sault Ste. Marie; meets second and fourth Fridays

Name,—Brotherhood of Locomotive Firemen and Enginemen, No. 606. Organized May 18, 1902; total membership, 17; average earnings per week, $14.40; average earnings per hour, 20c.; number of working hours first five days, 60; number on Saturday, 12; wages paid monthly; total number (union and non-union) employed at calling in locality, 15; no difference in wages or hours between members and non-members; no cash benefits; no special work for members; incorporated and registered. President, Geo. Armstrong, Sault Ste. Marie West; Corresponding Secretary, Jas. Gordon, Steelton, Ont.; meets first Wednesday, 8 p.m., third Wednesday, 3 p.m.

Name,—Moulders' Union of North America, No. 391. Organized Sept. 22, 1906; total membership, 9; average earnings per week, $18; average earnings per hour, 30c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; no idle days; total number (union and non-union) employed at trade in locality, 12; no difference in wages or hours between members and non-members; sick benefits, $5.40; death benefits, $100 to $200; out of work benefits, dues paid; no special work for members; not incorporated or registered. Corresponding Secretary, Archie Lawson, 26 Alberta Avenue, Box 809, Sault Ste. Marie; meets third Friday.

Name,—International Brotherhood of Maintenance of Way Employees. Organized 1904; total membership, 22; average earnings per week, $11.40; average earnings per hour, 19c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; no idle days; total number (union and non-union) employed at calling in locality, 30; no difference in wages or hours between members and non-members; body incorporated. President, W. Warmsley, Echo Bay, Ont.; Corresponding Secretary, W. Jewkes, Garden River, Ont.; meets last Saturday of month.

Name,—Brotherhood of Locomotive Engineers, No. 67. Organized 1902; total membership, 13; average earnings per week, $25; average earnings per hour, 30c.; number of working hours, first five days, 65; number on Saturday, 13; wages paid monthly; no idle days; no difference in wages or hours between members and non-members; sick benefits $1 per day; death benefits, $250; no special work for members; incorporated and registered. President, J. W. Cleminson, John Street, Steelton; Corresponding Secretary, A. C. Haynes, Box 2,700, Sault Ste. Marie; meets second and fourth Wednesdays.

Schreiber.

Name,—International Brotherhood of Maintenance of Way Employees, No. 260. Organized 1904; total membership, 60; average earnings per week, $12; average earnings per hour, section men 15c., bridge men 20c. to 26c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; no idle days; total number (union and non-union) employed at trade in locality, 100 to 200; difference in wages between members and non-members, from 15c. to 45c. per week; no cash benefits; no special work for members; body incorporated. President, T. Bosler, Schreiber; Corresponding Secretary, W. Sparkes, Schreiber; meets last Sunday.

Smith's Falls.

Name,—Brotherhood of Railway Trainmen, No. 527. Organized 1893; total membership, 60; average earnings per week, $16; average earnings per hour, 24c.; number of working hours first five days, 40; number on Saturday, 8; wages paid monthly; number of days idle per member during year, 60; cause of idleness, trade conditions; total number (union and non-union) employed at trade in locality, 65; no difference in wages and hours between members and non-members; death benefits $500, $1,000 or $1,350; no other cash benefits; no special work for members President, J. W. Thomas, Smith's Falls; Corresponding Secretary, A. M. Brown Smith's Falls; meets first Monday and third Wednesday.

Name,—Bricklayers' and Stonemasons' International Union, No. 121. Organized Nov., 1902; total membership, 20; average earnings per week, $21; average earnings per hour, 39c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average time idle per member during year about one half; cause for idleness, stormy weather and winter; total number employed at trade in locality, all union men; no cash benefits; no special work for members; incorporated in United States. President, W. H. Rathwell, Smith's Falls; Corresponding Secretary, Adam Johnston, Box 231, Smith's Falls; meets second and fourth Wednesdays.

Stevensville.

Name,—International Brotherhood of Maintenance of Way Employees, No 328. Organized March 11, 1907; total membership, 17; average earnings per week, $9.90; average earnings per hour, 16½c.; number of working hours first 5 days, 50; number on Saturday, 10; wages paid monthly; total number (union and non-union) employed at calling in locality, 37; no difference in wages or hours between members and non-members; no cash benefits; no special work for members; incorporated and registered. President, Tom Carver, Stevensville; Corresponding Secretary, Herbert W. Hann, Box 136, Stevensville; meets third Saturday of month

Stratford.

Name,—Order of Railway Conductors, No. 15. Organized, Jan. 27, 1881; total membership, 28; average earnings per week, $18; number of working hours varies; wages paid monthly; average number of days idle per member during year varies; general cause of idleness, depression of business; total number (union and non-union) employed at calling in locality, 30; no difference in hours or wages between members and non-members; no cash benefits; no special work for members President D. S. McHaffie, 231 Ontario St., Stratford; Corresponding Secretary, R. T. Buchanan, 37 Milton St., Stratford; meets 2nd and 4th Mondays.

Name,—Brotherhood of Locomotive Firemen and Enginemen, No. 38. Organized 1873; total membership 62; average earnings per week, $17; wages paid monthly; total number (union and non-union) employed at calling in locality, 85; no difference in wages or hours between members and non-members; death benefits amount of insurance policy; superannuation after 65 years of age; no special work for members; incorporated and registered. President, J. D. Smith, 45 East Gore St., Stratford; Corresponding Secretary, J. F. Spence, 93 Nile St., Stratford; meets 2nd Sunday 3.30 p.m., 4th Tuesday 7.30 p.m.

Name,—Cigar Makers' Union, No. 424. Organized 1899; total membership, male, 17; female, 2; average earnings per week, male and female, $10; average

earnings per hour, 21c.; number of working hours first 5 days, 40; number on Saturday, 7½; wages paid weekly; average number of days idle per member during year, 12; cause of idleness, Christmas holidays; total number (union and non-union) working at trade in locality, male, 17; female, 2; lack of employment benefit, $3 per week; sick benefits, $5; death benefits, $50 to $550; out of work benefits, $3. President, M. Whalen, 102 Grange St., Stratford; Corresponding Secretary, Jas. Hagarby, 179 St. David St., Stratford; meets 1st Wednesday.

Name,—Brotherhood of Locomotive Engineers, No. 188. Organized 1875; total membership, 79; average earnings per week, $20; paid by trip; wages paid monthly; total number (union and non-union) employed at calling in locality, 79; no difference in wages and hours between members and non-members; death benefits, $1,500 to $4,500; superannuation, $25 per month when totally disabled; classes of instruction held for members. President, Thos. J. Dolan, 75 Bay St.; Corresponding Secretary, J. Battley, 185 Douro St.; meets 1st and 3rd Saturdays.

Sturgeon Falls.

Name,—International Brotherhood of Paper Makers and Pulp Workers. Organized July 18, 1906; total membership, male 125; female, 6; average earnings per week, male, $15; female, $8; average earnings per hour, male 20c.; female, 10c.; number of working hours first 5 days, 60; number on Saturday, 12; wages paid fortnightly; short time from mills being in hands of receiver; no difference in wages or hours between members and non-members; out of work benefits in case of strike, $5 per week; no special work for members; incorporated and registered. President Louis Huot, Sturgeon Falls; Corresponding Secretary, Alf. Dennison, Sturgeon Falls; no regular meeting at present.

Thorold.

Name,—United Brotherhood of Carpenters and Joiners of America, No.1677. Organized May 17, 1901; total membership, 24; average earnings per week, $20; average earnings per hour, 35c; number of working hours first 5 days, 45; number on Saturday, 9; wages paid weekly or fortnightly; number of days idle per member during year, 60 to 90; cause of idleness, no work at trade; total number (union and non-union) employed at trade in locality, about 28; union men get 35c. per hour; non-union, 17½c. to 20c.; sick benefit $5 per week; death benefit, $200; superannuation, $3 per week; strike or lock-out benefit 60 per cent of scale price; no special work for members; incorporated and registered. President H. N. Higgins, Thorold; Corresponding Secretary, F. Parmenter, Box 224, Thorold; meets 2nd Thursday.

Toronto.

Name,—International Union of Bakers and Confectioners, No. 204. Total membership, 49; average earnings per week, $12; number of working hours first 5 days, 45; number on Saturday, 12; wages paid weekly; total number (union and non-union) employed at trade in locality, 300; no difference in wages or hours between members and non-members; no cash benefits; no special work for members; body incorporated. President, Geo. Giles, 23 Herrick St., Toronto; Corresponding Secretary, W. S. Murchie, 818 Dovercourt Road, Toronto; meets first and third Saturdays.

Name,—Journeymen Barbers' International Union. Organized Feb. 3rd, 1909; total number of members, 40; average earnings per week, $10; average earnings per hour, 10½c.; number of working hours first 5 days, 60; number on Saturday, 16; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, male, 450; female, 8; non-union men work 5 hours more per week than union men and receive $3 less; sick benefits, $5 per week; death benefit, $75 to $500; no special work for members; not incorporated or registered. President, J. H. Brett, 302 Robert St., Toronto; Corresponding Secretary, W. J. Rockett, 350 Queen St. West, Toronto; meets last Thursday.

Name,—Bartenders' Union and Benefit Society, No. 280. Organized 1900; total membership, 321; average earnings per week, $12 to $20; number of working hours first 5 days, 60; number on Saturday, 9; wages paid weekly, a few monthly; total number employed at calling in locality, about 450; no difference in wages or hours between members and non-members; sick benefit, $4 per week; death benefit, $50; no special work for members; body incorporated. President, Frank Walker, Grand Central Hotel, Toronto; Corresponding Secretary, A. O'Leary, Labour Temple, Toronto; meets every 4th Sunday 2.30 p.m.

Name,—International Alliance of Billposters' and Billers, No. 40. Total membership, 35; average earnings per week, $9; average earnings per hour, 12c.; number of working hours first 5 days, 60; number on Saturday, 16; wages paid weekly; average number of days idle per member during year, 90; cause of idleness, closing of theatres; total number (union and non-union) employed at calling in locality, 35; no special work for members. President J. McMillan, 185 Bellwoods Avenue, Toronto. Corresponding Secretary, Roy E. Smith, 11 Wellington St. East, Toronto; meets second Sunday 3 p.m.

Name,—Boiler Makers and Iron Shipbuilders of America, No. 128. Organized about 1893; total membership, 215; average earnings per week, $16.50; average earnings per hour, 31c.; number of working hours first five days, 50; number on Saturday, 5; wages paid fortnightly or on railroads monthly; average days idle per member during year, boilermakers, 10 days; shipbuilders, three months; cause of idleness, shipbuilders, inclement weather; total number (union and non-union) employed at trade in locality, 300; difference in wages between members and non-members, 50 per cent.; sick benefits, $3 per week; death benefits, $50 for one year, $100 for two years in good standing; no special work for members; not incorporated or registered. President, Chas. Rabey, 57 Brookfield St., Toronto; Corresponding Secretary, Jas. Monaghan, 401 Montrose Ave., Toronto; meets second and fourth Fridays.

Name,—International Brotherhood of Bookbinders, No. 28. Organized 1893; total membership, 300; average earnings per week, $16.50; average earnings per hour, 34c.; number of working hours first five days, 43¾; number on Saturday, 4¼; wages paid weekly; total number (union and non-union) employed at trade in locality, 300; death benefit $75; no special work for members; not incorporated or registered. President, Geo. A. Gore, 167 Lippincott St., Toronto; Corresponding Secretary, C. R. Hurst, 4 Soho St., Toronto; meets second Monday.

Name,—International Union of Boot and Shoe Workers, No. 233. Organized 1899; total membership, male, 245; female, 10; average earnings per week, male, $12; female, $9; number of working hours first five days, 45; number on Saturday, 4; wages paid weekly; average time idle per member during year, 4 weeks; cause of idleness, stock-taking and spring and fall slackness in trade; total number employed at trade in locality, male, 500; female, 200; no difference in wages and hours of labour between members and non-members; sick benefits, $5 per week for 13

weeks in year; death benefit, $100; out of work benefit fees paid; no special work for members; incorporated and registered. President, Walter Brown, 22 Wascara Ave., Toronto; Corresponding Secretary, Fred Crump, 11 Clarence Square, Toronto; meets every Monday.

Name,—Brass Moulders' International Union, No. 207. Organized January, 1910; total membership, 37; average earnings per hour, 30c.; number of working hours first 5 days, 50; number on Saturday, 5; wages paid weekly or fortnightly; no difference in wages or hours between members and non-members; sick benefits, $5.40 per week; death benefits, according to time in union; out of work benefit stamps. President, Jas. Cann, 347 Crawford St., Toronto; Corresponding Secretary, A. V. Mann, 44 Geneva Ave., Toronto; meets first and third Mondays.

Name,—International Union United Brewery Workers, No. 304. Organized June, 1902; total membership 300; average earnings per week, $12.50; average earnings per hour, 24c.; number of working hours first 5 days 47½ for nine months, 45 for three months; number on Saturday, 5; wages paid weekly; all working are organized. President, Jos. Rutledge, 40 Claremont St., Toronto; Corresponding Secretary, John D. Corcoran, Labour Temple, Toronto; meets second and fourth Fridays.

Name,—International Union United Brewery Workers, No. 317 (Malsters). Organized 1902; total membership 90; average earnings per week, $12.50; number of working hours first 5 days, 50; number on Saturday, 5; wages paid weekly; all organized; no cash benefits. President, John Seymour, 231 Manning Ave., Toronto; Corresponding Secretary, Alf. Cheesman, 80 Greenwood Ave., Toronto; meets second and fourth Thursdays.

Name,—Bricklayers', Masons' and Plasterers' International Union, No. 2. Organized 1871; total membership, 1,000; average earnings per week, $17.50; average earnings per hour, 50c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 60; cause of idleness, weather and scarcity of material; total number (union and non-union) employed at trade in locality, 1,200; difference in wages between members and non-members, 10c. to 15c. per hour; death benefits, $250; reading room kept in winter months for members; not incorporated or registered. President H. Fussell, 99 Balmoral Ave., Toronto; Corresponding Secretary, R. A. Watson, 2 Reid St., Toronto; meets every Tuesday.

Name,—Bridge and Structural Iron Workers, No. 4. Organized 1900; total membership, 150; average earnings per week, $10; average earnings per hour, 35c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid fortnightly; total number (union and non-union) employed at trade in locality, 165; difference in wages between members and non-members about 15c. per hour; death benefits, $100; no special work for members; not incorporated, but chartered. President, S. Stalford, 26 Winnifred Ave., Toronto; Corresponding Secretary, W. B. Gracie, 343 Symington Ave., Toronto; meets first and third Tuesdays.

Name,—Textile Workers of America, No. 695 (Brussels Carpets). Organized May, 1909; total membership, 92; number of working hours first 5 days, 52¼; number on Saturday, 5 hours for 3 months, 6 hours for 9 months; wages paid fortnightly; all organized; death benefits, $35; no special work for members. President Wm. Wyatt, 9 Alma Ave., Toronto; Corresponding Secretary, A. H. Woodhead; meets first Friday.

Name,—Builders' Labourers' Union, No. 1. Organized 1881; total membership, 1,000; average earnings per week, $9; average earnings per hour, 25c.; number of working hours first five days, 40; number on Saturday, 4; wages paid fort-

nightly; number of days idle per member during year, 50; cause of idleness, weather or lack of material; death benefits, $75; no other cash benefits; reading room for members in winter months. President, Sam. J. Cox, 462 Gerrard St. East, Toronto; Corresponding Secretary, John M. Mackintosh, 48 Humbert St., Toronto; meets every Tuesday.

Name,—Amalgamated Society of Carpenters and Joiners, No. 802. First Branch. Organized July, 1860; total membership, 150; average earnings per week, $15; average earnings per hour, 35c. to 45c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid weekly or fortnightly; average number of days idle per member during year, 25; cause of idleness, bad weather and high price of lumber; total number (union and non-union) employed at trade in locality, 2,500; difference in wages between members and non-members, 10c. to 15c. per hour; non-members work any hours; lack of employment benefits, $48 in twelve months; sick benefits, $3 per week; death benefit, $60; superannuation, $8 and $7 per four weeks; out of work benefits, $2.50 per week; tool benefit for loss by fire, water or theft, up to $75 in one claim; trade privileges, $3.75 per week; accident, $500; no special work for members; body registered with branches. President, Wm. Dadds, 155 Baldwin St., Toronto; Corresponding Secretary, Arthur Barker, Bertha St., Swansea; alternate Mondays from Jan. 10, 1910.

Name,—Amalgamated Society of Carpenters and Joiners, No. 803, Second Branch. Organized 1860; total membership, 65; average earnings per week, $14 50; average earnings per hour, 33c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid weekly and fortnightly; average number of days idle, 15; cause, bad weather; total number (union and non-union) employed at trade in locality, 3,000; non-members accept any wages from 25c.; sick benefits, $3 per week; death benefits, $60; superannuation, $2 per week; out-of-work benefits, $2.50 per week; accident benefit, total $500; partial, $250 or $125; no special work for members; incorporated and registered. President, Alex. Gray, 36 Adams Ave., Toronto; Corresponding Secretary, David Crombie, 42 Cedarvale Ave. East, Toronto; meets alternate Mondays from Jan. 4.

Name,—Amalgamated Society of Carpenters and Joiners, No. 805, Fourth Branch. Organized June, 1860; total membership, 90; average earnings per week, $14; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average days idle, vary; cause, severe climate; difference between members and non-members, 8c. per hour, and 5 hours per week; lack of employment benefit, $2.50 for 12 weeks; sick benefits, $3 per week for 26 weeks; death benefits, $60; superannuation, $2 or $1.75 per week; registered in Great Britain. President, Thos. Taylor, 47 Geneva Ave., Toronto; Corresponding Secretary, A. J. Udall, 26 Howie Ave., Toronto; meets alternate Mondays from Jan. 3.

Name,—Amalgamated Society of Carpenters and Joiners, No. 807, Sixth Branch. Organized 1866; total membership, 50; average earnings per hour, 33c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; non-members work any hours for any wages from 20c. per hour; sick benefit, $3 for 26 weeks and $1.50 as long as illness lasts; death benefit, $60; superannuation, $2 or $1.75; out-of-work benefits, $2.50 for 12 weeks, $1.50 for second twelve weeks; no special work for members; registered in Great Britain. President, Robt. Matthews, 792 Queen St. East, Toronto; Corresponding Secretary, Walter Cooley, 89 Tiverton Ave., Toronto; meets alternate Tuesdays from Jan. 11.

Name,—Brotherhood of Carpenters and Joiners of America, No. 27. Organized August 12, 1881; total membership, 260; average earnings per week, $12.30; average earnings per hour, 33c.; number of working hours first 5 days, 40; number

on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 48; cause of idleness, cold weather; total number (union and non-union) employed at trade in locality, 2,000; non-members work an hour more, and 3c. less per hour; death benefits, $200; no other cash benefits; no special work for members. President, J. Scames, 8 Maitland Place, Toronto; Corresponding Secretary, W. H. Cordwell, 39 Adams Ave., Toronto; meets first and third Fridays.

Name,—Brotherhood of Carpenters and Joiners of America, No. 1797. Organized 1881; total membership, 70; average earnings per week, $15.40; average earnings per hour, 35c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 15; cause of idleness, unfavorable weather; total number (union and non-union) employed at trade in locality, 1,200; difference in hours of labour between nembers and non-members, 6 per week; sick benefits by vote of local union; death benefits, $200; no other cash benefits; no special work for members; not incorporated. President, Alex. Leithe, 9 Charles St. East, Toronto; Corresponding Secretary, Robt. Hayward, 552 Clinton St., Toronto; meets first and third Thursdays.

Name,—Carriage and Waggon Makers' Union, No. 85. Total membership, 200; average earnings per week, $10; average earnings per hour, 20c.; number of working hours first 5 days, 45; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, 60 to 75; cause of idleness, lack of work, too many at trade; total number (union and non-union) employed at trade in locality, 400; difference between members and non-members, one hour per day; death benefits from $50 to $200; no special work for members; not incorporated or registered. President, F. J. Shield, 42 Dagmar Ave., Toronto; Corresponding Secretary, H. Gain, 344 Clinton St., Toronto; meets first and third Wednesdays.

Name,—Cigarmakers' International Union, No. 27. Organized 1869; total membership, male, 400; female, 40; average earnings per week, male and female, $11; average earnings per day, 25c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, 21; cause of idleness, stock-taking and strippers not working; lack of employment benefit, $3 per week; sick benefits, $5 for 13 weeks in year; death benefits, $50 to $550; no special work for members; incorporated and registered. President, J. McCarthy, 118 Manning Ave., Toronto; Corresponding Secretary, J. Pamphelon, 88 Church St., Toronto; meets third Monday.

Name,—Civic Employees' Benefit Association (Scavengers). Organized 1893; total membership, 100; average earnings per week, $13; number of working hours first 5 days, 50; number on Saturday, 5; wages paid weekly; no idle days; sick benefits, $3 per week; death benefits, $35; no special work for members; incorporated and registered. President, Geo. Byrt, 83 Wolseley St., Toronto; Corresponding Secretary, Sam Clark, 177 Garden Ave., Toronto; meets second Wednesday.

Name,—Civic Park Employees, No. 1. Organized Nov. 15, 1909; total membership, 15; average earnings per week, $12; average earnings per hour, 20c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly; average time idle per member during year, about 2 months; cause of idleness, wet weather and appropriation run out; total number (union and non-union) employed at trade in locality, about 150; some union men getting $2.25 per day and others $2; non-union men the same; no cash benefits; no special work for members; body registered. President, R. J. Smith, 76 Sheridan Ave., Toronto; Corresponding Secretary, J. W. Spanton, 9 O'Connell Ave., Toronto; no special meeting time.

Name,—Clothing Cutters' and Trimmers' Protective Association, No. 185. Organized July, 1902; total membership, 60; average earnings per week, $14; Number of working hours first 5 days, 45; number on Saturday, 4; wages paid weekly; average number of days idle per member during year, 30; cause of idleness, no orders; total number (union and non-union) employed at trade in locality, 150; some non-union shops work 3 hours longer per week; instructions on cutting to measure given to members; not incorporated or registered. President, Neil Gilchrist, 77 Montrose Ave., Toronto; H. A. Keller, 59 Grange Ave., Toronto; meets second and fourth Fridays.

Name,—International Brotherhood of Electrical Workers, No. 114 (Wiremen). Organized 1900; total membership, 200; average earnings per week, $15.40; average earnings per hour, 35c; number of working hours first 5 days, 40; number on Saturday, 4; wages paid weekly and fortnightly; average number of days idle per member during year, 60; cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, about 350; difference between members and non-members, 8c. per hour and one to two hours per day; death benefits, $100; no other cash benefits; no special work for members; incorporated and registered. President J. Brodie, 78 Mitchell Ave., Toronto; Corresponding Secretary, F. Marsh, 129 Manning Ave., Toronto; meets second and fourth Thursdays.

Name,—International Brotherhood of Electrical Workers, No. 353, Linemen. Organized Feb. 10, 1903; total membership, 100; average wages per week, $15 highest; average wages per hour, 25c. and 27c.; number of working hours first 5 days, 50; number on Saturday, 10, and 5 for 5 months; wages paid twice monthly; total number employed at trade in locality, 200; no difference in wages or hours between members and non-members; sick benefits $3 per week; death benefits, $100; body registered. President, S. Waller, 235 Salem Ave., Toronto; Corresponding Secretary, W. J. Clayton, 360½ Givens St., Toronto; meets first and third Wednesdays.

Name,—Amalgamated Society of Engineers, No. 675. Organized 1857; total membership, 140; average earnings per week, $14; number of working hours first 5 days, 50; number on Saturday, 5; wages paid weekly or monthly; lack of employment benefit, $2.50 per week; sick benefit, $2.50; death benefits, $60; superannuation, $1.50 to $2.50; out-of-work benefits, $2.50 per week; no special work for members; registered in England. President, H. H. Ballantyne, 105 Wilton Ave. East, Toronto; Corresponding Secretary, J. M. Clements, 650 Shaw St., Toronto; meets May 30, 1910, and alternate Mondays.

Name,—Amalgamated Society of Engineers, No. 676. Organized 1903; total membership, 30; average earnings per week, $14; average earnings per hour, 25c.; number of working hours first 5 days, 50; number on Saturday, 5; wages paid weekly and monthly; total number (union and non-union) employed at trade in locality, about 150; no difference in wages or hours between members and non-members; lack of employment benefit, $2.50 per week; sick benefits, $2.50; death benefits, $60; superannuation, $1.75 to $2.50 per week; out-of-work benefits, $2.50; benevolent grants of $10 to $30, as case may need; members' wives' death benefit, $25; no special work for members; registered in England. President, Fred O. Maker, 186 Bartlett Ave., Toronto; Corresponding Secretary, J. H. Eustace, 121 Garden Ave., Toronto; meets May 20, 1910, and alternate Fridays.

Name,—Steam Engineers (Hoisting and Portable) No. 356. Organized Jan. 2, 1908; total membership, 68; average earnings per week, $20; average earnings per hour, 40c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid fortnightly; average number of days idle per member during year,

about 100; cause of idleness, weather and inactive trade; total number employed at trade in locality, union, 68; non-union, about 50; difference in wages between members and non-members, 5 to 10 per cent., and longer hours of labour; death benefit, $100; no other cash benefit; reading and instruction room for members; incorporated and registered. President J. C. Mabee, 93 Monroe St., Toronto; Corresponding Secretary, Frank Palmer, 525 Queen St., East, Toronto; meets first and third Wednesdays.

Name,—United Garment Workers of America, No. 202. Organized 1906; total membership, female, 75; average earnings per week, $8; average earnings per hour, 17c.; number of working hours first five days, 44 and 10 min.; number on Saturday, 3 and 50 minutes; wages paid weekly; number of days idle per member during year, 30; cause of idleness, want of material from mills; total number (union and non-union) employed at trade in locality, female, about 300; wages slightly higher for union workers and hours shorter; not incorporated or registered. President, W. F. Bush, 120½ Lippincott St., Toronto; Corresponding Secretary, M. G. Murray, 220 Dunn Ave., Toronto; meets second Monday.

Name,—Glass Bottle Blowers' International Association, No. 66. Total membership, 70; piece work; number of working hours first 5 days, 42½; number on Saturday, 8; wages paid fortnightly; average number of days idle per member during year, 90; total number (union and non-union) employed at trade in locality, 85; death benefits, $500; no other cash benefit; no special work for members; not incorporated or registered. President, Geo. Gardner, Diamond Glass Co., Toronto; Corresponding Secretary, Howard Munn, 164 Argyle St., Toronto; meets second and fourth Saturdays.

Name,—Granite Cutters' International Association. Organized, March 10, 1877; total membership, 44; average earnings per week, $15; average earnings per hour, 36c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 60; cause of idleness, winter weather; union rate of wages, 37½c.; minimum non-union anywhere from 25c. to 35c.; death benefit, $200; superannuation, $10 per month after 62 years; strike pay, $1.50 per day; no other cash benefits; no special work for members in Toronto. President, Wm. Nettleship, Gibson Ave., Toronto; Corresponding Secretary, Jas. Sievewright, 882½ Yonge St., Toronto; meets fourth Thursday.

Name,—Journeymen Horseshoers' International Union, No. 49. Organized 18 or 20 years ago; total membership, 28; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly or fortnightly; average number of days idle per member during year, 14 to 21; cause of idleness, deep snow; total number (union and non-union) employed at trade in locality, about 150; non-members get from $10 to $14 per week; no special work for members. President, Jas. Flucker, 561 Dupont St., Toronto; Corresponding Secretary, T. McKague, 464 Gerrard St. East, Toronto; meets 2nd and 4th Fridays.

Name,—Wood, Wire and Metal Lathers' International Union. Total membership, 120; average earnings per week, $12; number of working hours first five days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 100; cause of idleness, cold weather; total number (union and non-union) employed at trade in locality, 160; members receive 25c. to 75c. per day more than non-members; death benefits, $100; superannuation, $7 per week. President, Avery Dearlove, 81 Yarmouth Road, Toronto; Corresponding Secretary, Geo. Coffey, 134 Sheridan Ave., Toronto; meets every Tuesday

Name,—United Brotherhood of Leather Workers on Horse Goods, No. 93. Total membership, 30; average earnings per week, $10; number of working hours first five days, 55; number on Saturday, 5; wages paid fortnightly; total number (union and non-union) employed at trade in locality, male, 300; female, 25; sick benefit, $3 per week; death benefit, $100; incorporated and registered. President T. Palmer, 116 Curzon St., Toronto; Corresponding Secretary, Hugh McWha, 139 Bathurst St., Toronto; meets first and third Tuesdays.

Name,—Lithographers' International Association, No. 12. Organized 10 years ago; total membership, 78; average earnings per week, $18; number of working hours first 5 days, 47½; number on Saturday 4½; wages paid weekly; shorter hours in summer time; total number (union and non-union) employed at trade in locality, 78 union, 50 or 60 non-union; no difference in wages or hours between members and non-members; death benefit $50 to $500, according to length of membership; no special work for members. President, Alex. Lennie, 391 Carlton St., Toronto; Corresponding Secretary, Jas. H. Christie, 416 Manning Ave., Toronto; meets 2nd and 4th Wednesdays.

Name,—International Longshoremen's Association, No. 646. Organized, Sept. 20, 1906; total membership, 30; wages paid weekly; average number of days idle per member during year, 180; cause of idleness, navigation closed; total number (union and non-union) employed at calling in locality, 42; no difference in wages or hours between members and non-members; no cash benefits; no special work for members; not incorporated or registered. President, J. Dowling, 33 Sackville St., Toronto; Corresponding Secretary, S. Stalford, 49 Winnifred Ave., Toronto; meets 1st Sunday 2.30 p.m.

Name,—International Association of Machinists, No. 235. Organized Feb. 13, 1892; total membership, 425; average earnings per week, $14; average earnings per hour, 27½c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly or fortnightly; average number of days idle per member during year, 25; cause of idleness, public holidays, sickness and lack of work; total number (union and non-union) employed at trade in locality, 1,062; difference in wages and hours between members and non-members, one hour per day and 2½c. per hour; lack of employment benefits, monthly dues; sick benefits, $3 per week for 8 weeks; death benefits, $50 to $200; out-of-work benefits, union dues. President, Rich. J. Young, 10 Russell Ave., Toronto; Corresponding Secretary, John O. Clayton, 141 Sumach St., Toronto; meets 2nd and 4th Wednesdays.

Name,—International Association of Marble Workers, No. 12. Organized Jan., 1896; total membership, 42; average earnings per week, $14; average earnings per hour, 37c. and 41c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average time idle per member during year, two months; cause of idleness, dull times; total number (union and non-union) employed at trade in locality, 70; difference between members and non-members, 2 hours per day; death benefits, $50; no other cash benefits; no special work for members; not incorporated or registered. President, Wm. Mullin, 10 William St., Toronto; Corresponding Secretary, L. W. Lang, 73 Portland St., Toronto; meets first and third Thursdays.

Name,—Motion Picture Machine Operators' Union. Organized, Oct., 1909; total membership, 35; average earnings per week, $15; average earnings per hour, 35c.; number of working hours first 5 days, 40; number on Saturday, 8; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, 50. President, Geo. Miht, 556 Church St., Toronto; Corresponding Secretary, W. A. Shank, 42 Henderson Ave., Toronto; meets first and third Sundays.

Name,—International Moulders' Union, No. 28. Organized 1860; total membership, 450; average earnings per week, $16; average earnings per hour, 31 5-9c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly or fortnightly; number of days idle per member during year, 30; cause of idleness, immigration; total number (union and non-union) employed at trade in locality, 700; difference in wages and hours between members and non-members, 50c.; sick benefit, $5.40; death benefit, $175, local $50; out-of-work benefit, dues paid; no special work for members; not incorporated or registered. President, A. J McCauley, 215 Howland Ave., Toronto; Corresponding Secretary, Robt. Harris, 110 Ossington Ave., Toronto; meets first and third Wednesdays.

Name,—International Musical Protective Association, No. 149. Organized Dec. 2, 1887; total membership, male, 561; female, 16; wages paid weekly in theatres; non-members play more hours for less money; sick benefits $3 per week; death benefits, $50; old age fund; no special work for members; incorporated and registered. President, J. E. Jarrott, 221 Dunn Ave., Toronto; Corresponding Secretary, Jos. Ball, 114 Augusta Ave., Toronto; meets first Sunday, 2.15 p.m.

Name,—Brotherhood of Painters, Decorators and Paperhangers of America, No. 219. Organized March, 1907; total membership, 93; average earnings per week, $13.20; average earnings per hour, 30c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid weekly or in some cases fortnightly; average number of days idle per member during year, 65; cause of idleness, seasons and influx of immigrants; total number (union and non-union) employed at trade in locality, 1,500; difference between members and non-members in wages 20 to 40 per cent., in hours, 5 per week; death benefits, $50 to $300; rooms for members during winter months; incorporated in United States and registered. President, Wm. Stockdale, 684 Shaw St., Toronto; Corresponding Secretary, C. Hislop, 6 Argyle St., Toronto; meets first and third Wednesdays.

Name,—Brotherhood of Painters, Decorators and Paperhangers of America. Organized April, 1907; total membership, 60; average earnings per week, $13.20; average earnings per hour, 30c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 90 to 120; cause of idleness, slackness in building trade and surplus of workmen; total number (union and non-union) employed at trade in locality, about 500; difference in wages between members and non-members, 5c. or 10c. per hour; death benefits, $100; no other cash benefits; no special work for members; body incorporated. President, Chas Watson, 973 Eastern Ave., Toronto; Corresponding Secretary, J. G. Fitze, 15 Clark St., Toronto; meets second and fourth Wednesdays.

Name,—Photo Engravers' International Union, No. 35. Total membership, 43; average earnings per week, $20; average earnings per hour, 43c.; number of working hours first 5 days, 42½; number on Saturday, 4; wages paid weekly; total number (union and non-union) employed at trade in locality, 85; no difference in wages or hours between members and non-members; death benefits, $75; not incorporated or registered. President, J. Egan, 167 River St., Toronto; Corresponding Secretary, J. Robson, 330 Gladstone Ave., Toronto; meets first Monday.

Name,—Piano, Organ and Musical Instrument Workers' Union, No. 39. Organized, Dec., 1902; total membership, 300; average earnings per week, $13; number of working hours first 5 days, 45; number on Saturday, 5; wages paid fortnightly; total number (union and non-union) employed at trade in locality, 700; no difference in wages or hours between members and non-members; sick benefits, $5 per week; death benefits, $50 to $200, according to length of membership; not

incorporated or registered. President G. E. Manuel, 136 Tecumseth St., Toronto; Corresponding Secretary, R. J. Whitten, 112 Russel Ave., Toronto; meets second and fourth Tuesdays.

Name,—Operative Plasterers' International Union, No. 48. Total membership, 220; average earnings per hour, 50c.; number of working hours, first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 98; cause of idleness, cold in winter and buildings not ready in spring; non-members work from 10c. to 15c. an hour less than members; death benefits, $100 by local, $50 by international; no special work for members. President, Fred Brooks, 709 Ossington Ave., Toronto; Corresponding Secretary, Jas. Ward, 150 Symington Ave., Toronto; meets second and fourth Mondays.

Name,—Plasterers' Labourers' Association, No. 1. Organized 1882; total membership, 275; average earnings per week, $9; average earnings per hour, 30½c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; number of days idle per member during year, about 80; cause of idleness, weather and slack business; total number (union and non-union) employed at trade in locality, about 400; not much difference in wages or hours between members and non-members; death benefits, $50; no other cash benefits; no special work for members; not incorporated or registered. President, Rich. Nutter, 96 River St., Toronto; Corresponding Secretary, Harry Tattersall, 59 Albert St., Toronto; meets first and third Tuesdays.

Name,—United Association Plumbers, Gas and Steam Fitters, No. 46. Total membership, 305; average earnings per hour, 42½c.; number of working hours first five days, 40; number on Saturday, 4; wages paid weekly or fortnightly; average number of days idle per member during year, 60; cause of idleness, lack of work; no difference in wages or hours between members and non-members; sick benefits, $5 per week; death benefit, $100; out-of-work benefit, remission of dues; educational meetings and lectures for members; not incorporated or registered. President, F. P. Junkins, 355 Delaware Ave., Toronto; Corresponding Secretary, E. Brettam, 188 Sherbourne St., Toronto; meets 2nd and 4th Fridays.

Name,—Web Pressmen's Union, No. 1. Organized 1893; total membership, 40; average earnings per week, $18; number of working hours first 5 days, 40; number on Saturday, 8; wages paid weekly; no idle days; total number(union and non-union) employed at trade in locality, 42. President, Geo. Lambrix, 201 Simcoe St., Toronto; Corresponding Secretary, Wm. Hart, 201 Simcoe St., Toronto; meets 3rd Monday.

Name,—Mailers' Union No. 5. Organized Nov. 11, 1893; total membership, 35; average earnings per week, $16; average earnings per hour, 33 1-3c.; death benefit, $75; no other cash benefit; no special work for members; incorporated and registered. President, J. G. Gallagher, 50 Beaconsfield Ave., Toronto; Corresponding Secretary, E. McGarry, 41 North Markham St., Toronto; meets first Monday.

Name,—Typographical Union, No. 91. Organized Sept., 1844. Total membership, male, 960; female, 2; average earnings per week, male, $17; female $16; average earnings per hour, male, 35c.; female, 33c.; number of working hours first 5 days, 43¾; number on Saturday, 4¼; wages paid weekly; average number of days idle per member during year, 21; cause of idleness, sickness and holidays; total number (union and non-union) employed at trade in locality, male, 975; female, 30; ninety-five per cent. are union; wages of non-members 25 per cent. lower; sick benefit $4 per week; death benefit, $125; old age pension $4 per week, for 60 years of age and 20 years membership; no special work for members; incor-

porated and registered. President, Sam. Hadden, 110 Front St. East, Toronto; Corresponding Secretary, Thos. C. Vodden, 137 First Ave., Toronto; meets first Saturday.

Name,—Sheet Metal Workers' International Union, No. 30. Organized Aug. 6, 1896; total membership, 125; average earnings per hour, 32½c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly; total number (union and non-union) employed at trade in locality, between 400 and 500; some men outside the union are working for 20c. per hour; no cash benefits; instruction in pattern drafting to members; not incorporated or registered. President, John Lawson, Davisville, Ont.; Corresponding Secretary, J. S. Chapman, 294 Margueretta St., Toronto; meets first and third Fridays.

Name,—Slate and Tile Roofers' International Union, No. 39. Organized Jan. 1910; total membership, 25; average earnings per week, $12; average earnings per hour, 35c.; number of working hours first 5 days, 45; number on Saturday, 5; wages paid weekly; total number (union and non-union) employed at trade in locality, about 35; death benefits, $100. President, Jas. Hall, 108 Claremont St., Toronto; Corresponding Secretary, Arth. Pullan, 140 Hampton Ave., Toronto; meets first and third Mondays.

Name,—International Union Steam Engineers, No. 152. Organized June 1, 1902; total membership, 284; average earnings per week, $13; average earnings per hour, 22c.; number of working hours first 5 days, 50; number on Saturday, 10; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, about 400; no difference between members and non-members in wages; in plants running 24 hours, union men work 8 hours and non-union, 12; club room for members in Labour Temple, and evening technical classes in winter. President, F. W. Barron, 421 Ontario St., Toronto; Corresponding Secretary, R. B. Shepherd, 208 Wellesley St., Toronto; meets second and fourth Wednesdays.

Name,—International Steam, Water, Gas and Power Pipe Fitters, No. 78. Organized Oct., 1908; total membership, 85; average earnings, per week, $17.50; average earnings per hour, 40c.; number of working hours first 5 days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 35; cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, 150; non-union men receive 15 to 20 per cent. less than union men; death benefits, $150; educational meetings and examinations for members; body incorporated. President, P. J. Smith, 116 River St., Toronto; Corresponding Secretary, G. H. Milligan, 287 Sumach St., Toronto; meets second and fourth Tuesdays.

Name,—Stereotypers' and Electrotypers' Union, No. 21. Organized Jan. 31, 1893; total membership, 60; average earnings per week, $18; average earnings per hour, 37½c.; number of working hours first 5 days, stereotypers, 40; electrotypers, 45; number on Saturday, stereotypers, 8; electrotypers, 4; total number (union and non-union) employed at trade in locality, 60; all working are members; death benefit, $100; no other cash benefit; no special work for members; not incorporated or registered. President, Ed. Young, 290 Ontario St., Toronto; Corresponding Secretary, H. Bartley, 973 Logan Ave., Toronto; meets first Thursday.

Name,—Journeymen Stonecutters Association of North America. Organized Dec. 5, 1853; total membership 70; average earnings per week, $12; average earnings per hour, 28½c.; number of working hours first five days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year 130; cause of idleness, winter weather and artificial stone; total num-

ber (union and non-union) employed at trade in locality, 120; union men get 50c. per hour, non-union men 35c. to 50c.; death benefits, $100; no special work for members; incorporated and registered. President R. Greggie, 2 Frankish Ave., Toronto; Corresponding Secretary, Harry Newson, 41 River St. or Box 282, Toronto; meets 2nd and 4th Fridays.

Name,—Street Railway Employees' Union. Organized 1893; total membership, 1200; average earnings per week, $12; average earnings per hour, 22c.; number of working hours first five days, 45; number on Saturday 9; wages paid monthly; average days idle per member during year 25; cause of idleness, sickness and holidays; total number (union and non-union) employed at calling in locality, 1,350; no difference in wages or hours between members and non-members; sick benefits, $3 per week; death benefits $100; superannuation $3 to $6 per week; no special work for members; incorporated and registered. President, Wm. Murray, 569 Dundas St., Toronto; Corresponding Secretary, Jos. Gibbons, Room 4, Labour Temple, Toronto; meets 1st Monday at 8 p.m., 3rd Sunday at 2 p.m.

Name,—Journeymen Tailors' Union of America, No. 132. Organized 1890; total membership, male 250, female 20; average earnings per week, male $15, female $11; wages paid weekly; average number of days idle per member during year, 40; cause of idleness, midsummer and midwinter between seasons; total number (union and non-union) employed at trade in locality, male 500, female 300; no difference in wages or hours between members and non-members; sick benefits $5 per week for 10 weeks; death benefits, $25 to $100; funeral benefits, according to length of membership; lectures for members are given on practical work and technicalities of trade; not incorporated, label registered. President, Geo. Sangster, 68 Vermont Ave., Toronto; Corresponding Secretary, Jas. Watt, Labour Temple, Toronto; meets 4th Monday.

Name,—Journeymen Tailors' Union of America, No. 156. Organized May, 1903; total membership, male 10, female 11; average earnings per week, male $14, female $9; average earnings per hour, male 10c., female 9c.; number of working hours first five days, 50; number on Saturday, 9; wages paid fortnightly; average time idle per member during year two to four weeks; cause of idleness slack season in August and February; total number employed at trade in locality, male 13, female 12; no difference in wages or hours between members and non-members; sick benefit, $5 per week; death benefit, $50. President, Chas. Shore, 277 Willoughby Ave., Toronto; Corresponding Secretary, M. P. Aitchison, 409 Woodville Ave., Toronto; meets 1st Monday.

Name,—Team Owners' Association, No. 1. Total membership, 375; no special work for members; not incorporated or registered. President Jos. Caldwell, 33 Hamilton St., Toronto; Corresponding Secretary, J. Gosnell, 102 Sherbourne St., Toronto; meets 1st and 3rd Thursdays.

Name,—International Brotherhood of Teamsters, No. 457 (Coal); Organized Oct. 4, 1904; total membership, 98; average earnings per week, $12 and $13; average earnings per hour, 20c. and 22c.; number of working hours first five days, 50; number on Saturday, 10, except summer; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, 360; difference in wages between members and non-members, $1 to $3; in case of sickness or death members are not allowed to suffer. President, John Notley, 245 Lippincott St., Toronto; Corresponding-Secretary, Henry Beerton, 305 Sumach St., Toronto; meets 1st and 3rd Sundays, 2.30 p.m.

Name,—Commercial Telegraphers' Union, No. 1, C. P. System. Re-organized May, 1909; average earnings per week, male $13.50, female $12.50; average earn-

ings per hour, male 25c., female 23c.; number of working hours first five days, 45; number on Saturday, 9; wages paid monthly; total number (union and non-union) employed at trade in locality, male 200, female 50; no difference in wages or hours between members and non-members; no cash benefits, but insurance department separate; no special work for members; not incorporated or registered. President, C. E. Hill, 362 Brock Ave., Toronto; Corresponding Secretary, D. Warner, 422 Ashdown Block, Winnipeg, Man., meets monthly.

Name,—International Stage Employees' Union, No. 58. Total membership, 60; average earnings per week, $8; average earnings per hour, 30c.; wages paid weekly; total number (union and non-union) employed at calling in locality, 60; no special work for members; incorporated and registered. President, Robt. Newman, 425 Carlton St., Toronto; Corresponding Secretary, J. E. Ferris, 345 Huron St., Toronto; meets 2nd Sunday afternoon.

Name,—Ceramic, Mosaic and Encaustic Tile Layers and Helpers, No. 37. Organized 1902; total membership 50; average earnings per week, $17; average earnings per hour, 40c.; number of working hours, first five days, 40; number on Saturday, 4; wages paid fortnightly; average number of days idle per member during year, 14; cause of idleness, building slack; total number (union and non-union) employed at trade in locality, 55; no difference in wages or hours between members and non-members. President, John McCarroll, 389 Sorauren Ave., Toronto; Corresponding Secretary, F. Parker, 260 Brunswick Ave., Toronto; meets 1st and 3rd Fridays.

Name,—Tobacco Workers' International Union, No. 63. Organized Dec., 1900; total membership, male 14; female 4; average earnings per week, men $11, boys $6, female $9; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 30; cause of idleness, no work; total number employed at trade in locality, male 14, female 4; all union members; sick benefits $3 per week; death benefits $50; no other cash benefits; no special work for members; not incorporated or registered. President, Wm. Bugghye, 292 Logan Ave., Toronto; Corresponding Secretary, John Keith, 57 Marlborough Ave., Toronto; meets 2nd Thursday.

Name,—Upholsterers' International Union, No. 30. Organized 1894; total membership, 50; average earnings per week, $15; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 5; wages paid weekly; average number of days idle per member during year, 20; cause of idleness, slack season winter and summer; total number (union and non-union) employed at trade in locality, 100; difference in wages between members and non-members, 5c. per hour, no difference in time; no cash benefits; no special work for members; not incorporated or registered. President, W. J. Reilly, 215 Bathurst St., Toronto; Corresponding Secretary, F. W. Prior, 370 Margueretta St., Toronto; meets 1st and 3rd Fridays.

Name,—Order of Railway Conductors, No. 17. Total membership, 63; wages paid monthly; no idle days; total number (union and non-union) employed at calling in locality, 50; no difference in wages or hours between members and non-members; no cash benefits; no special work for members; incorporated and registered. President, J. D. McMullan, 51 Lakeview Ave., Toronto; Corresponding Secretary, A. Riley, 706 Markham St., Toronto; meets 1st and 3rd Sundays.

Name,—Order of Railway Conductors, No. 345. Organized 1893; total membership, 71; average earnings per year about $1,500; working hours unlimited; wages paid monthly; no idle days; no difference in wages and hours between members and non-members; no special work for members; incorporated and registered.

President, Ed. Chapman, West Toronto; Corresponding Secretary, G. A. Wood, 57 Empress Crescent, Toronto; meets 2nd and 4th Sundays, 2.30 p.m.

Name,—Brotherhood of Locomotive Engineers, No. 70. Organized 1868; total membership 72; average earnings per hour, 35c.; no set hours for working; wages paid monthly; total number (union and non-union) employed at calling in locality, 80; no difference in wages or hours between members and non-members; death benefits $1,500 to $4,500; no special work for members; not incorporated. President, H. Newcombe, 490 Markham St., Toronto; Corresponding Secretary, J. Belyea, 46 Bellevue Place, Toronto; no fixed nights of meeting.

Name,—Brotherhood of Locomotive Engineers, No. 520. Organized Nov. 1893; total membership, 37; average earnings per week, $20; average earnings per hour, 35c.; working hours on yard engines, 72; wages paid monthly; no difference in wages or hours between members and non-members; sick benefits, $3 per week; death benefits, insurance; no special work for members; incorporated in U. S. President, D. J. Kerr, 8 Enderby Road, Toronto; Corresponding Secretary, T. J. Looney, 2136 Gerrard St. East, Toronto; meets 1st and 3rd Sunday afternoons.

Name,—Brotherhood of Locomotive Firemen and Enginemen, No. 67. Organized March, 1877; total membership, 57; wages paid monthly; total number (union and non-union) employed at calling in locality, union, 57; non-union, 20; no difference in wages and hours between members and non-members; sick benefits, $3 per week; death benefits, according to policy; no other cash benefits; no special work for members; not incorporated or registered. President, Geo. E. Crowhurst, 90 Wolseley St., Toronto; Corresponding Secretary, Jas. Pratt, 172 Huron St., Toronto; meets 1st Wednesday night and 3rd Sunday afternoon.

Name,—Brotherhood of Locomotive Firemen and Enginemen. Organized Feb. 27, 1902; total membership, 60; average earning per week, $15 to $18; no stated hours; wages paid monthly; total number (union and non-union) employed at calling in locality, 63; no difference in wages and hours between members and non-members; sick benefits, $3 per week; death benefits, five classes, $500, $1,000, $1,500 $2000 and $3000; out of work benefits, dues kept paid up; no special work for members; incorporated internationally. President, T. F. McCabe, 27 Kimberley Ave, Toronto; Corresponding Secretary, H. Schaefer, 36 Lyall Ave., Toronto; 2nd and 4th Tuesday afternoons.

Name,—Railway Mail Clerks' Association. No special work for members; not incorporated or registered. President, W. G. Jessop, 50 Afton Ave., Toronto; Corresponding Secretary, R. Cowling, 430 Manning Ave., Toronto; no regular time for meetings.

Name,—Brotherhood of Railway Trainmen, No. 255. Organized March 3, 1888; total membership, 290; average earnings per week, $15 to $18; average earnings per hour, 20c. to 31c.; working hours vary; wages paid monthly; days idle, vary; cause of idleness, lack of freight; total number (union and non-union) employed at trade in locality, 375; no difference in wages and hours between members and non-members; death benefits, $500 to $1,350; no other cash benefits; no special work for members; incorporated and registered. President, D. O'Mara, 385 Pacific Ave., Toronto; Corresponding Secretary, J. H. Davison, 168 St. John's Road, Toronto; meets 1st and 3rd Sundays 2 p.m., and Monday, except those following 1st and 3rd Sundays, at 1.30 p.m.

Name,—Brotherhood of Railway Trainmen, No. 322. Organized Sept., 1883; total membership, 170; average earnings per week, $15; average earnings per hour, 25c.; working hours uncertain; wages paid monthly; total number (union and non-union) employed at calling in locality, 225; no difference in wages or hours between members and non-members; sick benefits, $3 per week; death benefits from

$250 to $2,000; no special work for members. President, J. Tait, G. T. R., New Toronto; Corresponding Secretary, H. T. Meredith, 282 Crawford St., Toronto; meets first Sunday 2.30 p.m., third Sunday 7.30 p.m.

Name,—Press Assistants', No. 1, C. F. of L., Organized, May, 1909; total membership, male 225, female 2; average earnings per week, male and female 23½c., number of working hours first five days, 43¾; number on Saturday, 4¼; wages paid weekly; average number of days idle per member during year, 30; cause of idleness, slack business and closing down of night staffs; total number (union and non-union) employed at trade in locality, 250; no difference in wages and hours between union and non-union members; death benefits, $75; no special work for members; not incorporated or registered. President, Thos. Morton, 13 Dean St.; Corresponding Secretary, F. S. Attrell, 127 Marlborough Ave.; meets 1st Thursday.

WELLAND.

Name,—Bricklayers', Masons', and Plasterers' International Union, No. 32. Organized Dec., 1908; total membership, 23; average earnings per week, $20; average earnings per hour, 45c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 60; cause of idleness, dull times; total number (union and non-union) employed at trade in locality, 28; difference in wages between union and non-union men, 10c. per hour. President, Walter Edington, Franklin St., Welland; Corresponding Secretary, Cardoc Roberts, Welland; meets first and third Mondays.

Name,—Amalgamated Society of Carpenters and Joiners, No. 813. Organized June 4, 1906; total membership, 13; average earnings per week, $12; average earnings per hour, 22½c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 75; cause of idleness, inclemency of weather; total number (union and non-union) employed at trade in locality, 80; difference in wages between members and non-members, 2½c. or 5c. per hour; lack of employment benefits, $2.50 for 12 weeks and $1.50 for second 12 weeks; sick leave $3 for 13 weeks and $1.50 for next 13 weeks; death benefits, $60; superannuation, member for 25 years, $2 a week for life, members for 18 years, $1.75 a week; issue monthly report with open column for discussion of questions of interest to members; incorporated and registered. President, Geo. Urquhart, Garner Ave., Welland; Corresponding Secretary, Alfred Laing, Box 121, Welland; meets every alternate Monday from Jan. 10, 1910.

Name,—United Brotherhood of Carpenters' and Joiners, No. 969. Organized about 1900; total membership, 25; average earnings per hour, 30c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; total number (union and non-union) employed at trade in locality, 50; difference in wages between members and non-members, 5c. per hour; death benefits, $200; no other cash benefits; special work for members after business meetings; body registered. President, Wm. Burges, Welland; Corresponding Secretary, Byron Jackson, Welland; meets 2nd and 4th Fridays.

Name,—International Moulders' Union, No. 472. Organized Nov. 1, 1907; total membership, 50; average earnings per hour, 27½c. to 32½c.; number of working hours first five days, 10; number on Saturday, 5 in summer, 9 in winter; wages paid fortnightly; total number employed at trade in locality, 50, all union; sick benefits, $5.40; death benefits, $100 to $200; out of work benefit, 13 weeks out of work stamps. President, Wm. Brown, Welland P.O.; Corresponding Secretary, Edgar Jones, Box 117, Welland; meets 1st and 3rd Wednesdays.

WINDSOR.

Name,—Journeymen Barbers' International Union, No. 451. Organized Oct. 16, 1902; total membership, 25; average earnings per week, $12; number of working hours first five days, 65; number on Saturday, 16; wages paid weekly; total number (union and non-union) employed at trade in locality, 32; no difference in wages between members and non-members, and city by-law governs hours; sick benefits, $5 weekly; death benefits, $60 to $500. President, Andrew Kenney, 49 Sandwich St. West, Windsor; Corresponding Secretary, Arthur Wickens, 31 Brant St., Windsor; meets 4th Wednesday.

Name,—Brotherhood of Painters, Decorators and Paperhangers, No. 629. Organized April, 1902; total membership, 15; average earnings per week, $13.50; average earnings per hour, 28⅛c.; number of working hours first five days, 40; number on Saturday, 8; wages paid weekly; average number of days idle per member during year 58; general cause of idleness, winter weather; total number (union and non-union) employed at trade in locality, 30; union men work 8 hours for $2.25, non-union men work 9 hours for same; death benefits $50 to $300; body incorporated. President, Geo. H. Towle, 40½ Sandwich St. West, Windsor; Corresponding Secretary, R. H. Brampton, 40 Marentette Ave., Windsor; meets 2nd Thursday.

Name,—National Association of Marine Engineers, No. 11. Organized June, 1903; total membership, 17; average earnings per month $90; number of working hours first five days, 60; number on Saturday, 12; wages paid monthly; total number (union and non-union) employed at calling in locality, 25; no difference in wages or hours between members and non-members; no cash benefits; no special work for members. President, Alex. McDonald, 28 Crawford Ave., Windsor; Corresponding Secretary, Neil Maitland, 221 London St., Windsor.

Name,—Journeymen Tailors' Union of America, No. 114. Organized Sept. 1, 1902; total membership, male 36, female 21; average earnings per week, male $14, female $10; average earnings per hour, male 25c., female 15c.; no regular working hours; wages paid weekly; average time idle per member during year, one month; cause of idleness, slack season; total number employed at trade in locality, male 36, female 21, all union; sick benefits, $5 for 10 weeks; death benefits, $25 to $150; no special work for members; incorporated and registered. President, H. Dumas, Box 351, Windsor; Corresponding Secretary, G. H. Elliott, Box 351, Windsor; meets first and third Mondays.

Name,—Windsor and Walkerville Protective Association of Team Drivers, No. 1. Organized April 1, 1909; total membership 28; average earnings per week, $24; average earnings per hour, 45c.; number of working hours first five days, 45; number on Saturday, 9; wages paid weekly; total number (union and non-union) employed at calling in locality, 30; no special work for members. President, Frank Hormon, Sandwich, Ont.; Corresponding Secretary, M. Delbert Kennedy, Campbell Avenue, Windsor; meets first and third Thursdays.

Name,—Order of Railway Conductors, No. 494. Organized July 29, 1906; total membership, 40; average earnings per week, $20; average earnings per hour, 30c.; number of working hours first five days, 50; number on Saturday, 10; wages paid monthly; total number (union and non-union) employed at calling in locality, 50; no difference in wages or hours between members and non-members; death

benefits, $1,000 to $3,000; no other cash benefits; no special work for members. President, John Merritt, 14 Pelissier Street, Windsor; Corresponding Secretary, Geo. Jackson, 114 Goyeau Street, Windsor; meets second and fourth Sundays, 2.30 p.m.

Name,—Brotherhood of Locomotive Engineers, No. 390. Organized 1892; total membership, 24; average earnings per week, $20; wages paid monthly; no difference in wages or hours between members and non-members; death benefits, optional insurance; not incorporated or registered. President, Wm. Latcham, Sandwich St., East, Windsor; Corresponding Secretary, G. W. Richardson, 59 Aylmer Street, Windsor; meets second and fourth Tuesdays.

Name,—Brotherhood of Railway Trainmen, No. 316. Organized 1898-9; total membership, 107; average earnings per week, $18; wages paid monthly; total number (union and non-union) employed at calling in locality, 107; no difference in wages or hours between members and non-members: no cash benefits; no special work for members; incorporated and registered. President, Alfred Staples, 69 Albert Street, Windsor; Corresponding Secretary, 168 Dougal Avenue, Windsor; meets first and third Wednesday nights, and second and fourth Sunday mornings.

Name,—Brotherhood of Locomotive Firemen and Enginemen, No. 42. Organized July, 1890; total membership, 42; average earnings per week, $15; number of working hours first five days, 60; number on Saturday, 12; wages paid monthly; total number (union and non-union) employed at calling in locality, 48: no difference in wages or hours between members and non-members; death benefits, policy claims; cash benefits paid to disabled members; no special work for members; body registered. President, Ernest Gay, 91 Dougal Ave., Windsor; Corresponding Secretary, A. R. Butler, 28 Glengarry Ave., Windsor; meets first Sunday, 2.30 p.m., and fourth Tuesday, 8.30 p.m.

Name,—Bricklayers', Masons' and Plasterers' International Union, No. 6. Total membership, 30; average earnings per week, $29.70; average earnings per hour, 55c.; number of working hours first five days, 45; number on Saturday, 5 hours for five summer months; wages paid weekly; average number of days idle per member during year, 90; cause of idleness, weather; total number employed at trade in locality, 40; all union; death benefits, $200. President, W. J. Nesbitt, 25 McKay Avenue, Windsor; Corresponding Secretary, Rupert G. Thompson, 72 Cameron Avenue, Windsor; meets every Tuesday.

Name,—Typographical Union, No. 553. Organized Sept. 30, 1909; total membership, 7; average earnings per week, $12; average earnings per hour, 25c.; number of working hours first five days, 43¾; number on Saturday, 4¼; wages paid weekly; no idle days; total number (union and non-union) employed at trade in locality, male 20, female 1; difference in wages between members and non-members, 10 per cent.; death benefits depend on length of membership; no other cash benefits; no special work for members. President, W. J. Walker, Stearn's Laboratory, Windsor; Corresponding Secretary, Geo. E. Marentette, 98 Albert Street, Windsor; meets first Monday.

Woodstock.

Name,—Bartenders' International League, No. 344. Organized about 1900; total membership, 7; average earnings per week, $10; average earnings per hour.

17c.; number of working hours first five days, 60; number on Saturday, 12 one week, 6 the next; wages paid fortnightly; no idle days; total number employed at calling in locality, 14; no difference in wages and hours between members and non-members; death benefits, $50; no other cash benefits; no special work for members; incorporated and registered. President, Patrick J. Farrell, Royal Hotel, Woodstock; Corresponding Secretary, M. C. Barrey, Royal Hotel, Woodstock; meets first of each month.

Name,—Bricklayers' and Masons' International Union, No 22. Organized Dec, 5, 1902; total membership, 27; average earnings per week, $21.60; average earnings per hour, 40c.; number of working hours first five days, 45; number on Saturday, 9; wages paid fortnightly; average number of days idle per member during year, 150; cause of idleness, inclement weather; total number employed at trade in locality, 27; all union men; no cash benefits; no special work for members; body registered. President, Stephen May, Woodstock, P.O.; Corresponding Secretary, E. Johnson, Woodstock; meets second and fourth Tuesdays.

Name,—International Moulders' Union, No. 249. Organized 1800; total membership, 22; average earnings per hour, 27½c.; number of working hours first five days, 50; number on Saturday, 9; wages paid weekly; average number of days idle per member during year, 60; cause for idleness, trade dull; total number (union and non-union) employed at trade in locality, union 22, non-union 6; difference in wages between members and non-members, 7½c. per hour; sick benefits, $5 per week; death benefits $100 to $200; no special work for members. President, Jas. Martin, Woodstock; Corresponding Secretary, Fred. Childs, Box 746, Woodstock; meets third Friday.

Name,—Typographical Union, No. 317. Organized Oct. 7, 1909; total membership, 18; average earnings per week, $13; average earnings per hour, 27c.; number of working hours first five days, 40; in summer, 43½; number on Saturday 8, in summer 4½; wages paid weekly; total number (union and non-union) employed at trade in locality, male 26, including 6 apprentices, female 4; no difference in wages or hours between members and non-members; death benefit, $75; superannuation, $4 per week at 60 years of age; strike benefits, $7 and $5; international technical correspondence school for members. President, John E. Shannon, Express Printing Co., Woodstock; Corresponding Secretary, J. M. Manser, 312 Dundas Street, Woodstock; meets first Thursday.

SUGGESTIONS FROM LABOUR ORGANIZATIONS.

No. 12.—Our union would like to see a legalized 8 hour day, Government inspection of scaffolding and buildings, and greater Government assistance to technical education, using schools and public libraries for mediums.

No. 15.—The question of licensing all barbers has been discussed and found much favour, also to have a practical examination passed before license is granted.

No. 17.—We think that women should not be allowed to work in the foundries, as it has a tendency to degrade them, to lower the wages of the men and to keep a number of young men out of work. We should have a weekly pay day. Factory in-

spectors should visit the foundries three or four times a year. There should be a bath-room, and a place where moulders could change their wet clothes.

No. 26.—We would like to see an 8 hour day in all Government work.

No. 32.—Our union believes that if the Ontario Legislature would insist on having the union label on all its printed matter, it would assist us materially in the struggle for fair wages. We know that our employers have to compete with non-union offices and unfair wage-payers, and would like to assist them in doing so. That is where the label does its work.

No. 41.—We believe that if more attention were paid by the Factory Inspectors to the ventilation of foundries, especially in the winter months, it would be very beneficial to our trade. We have noticed that the inspector is generally shown round by one of the office staff, and at a time when the cast is not on, whereas if he were to see what the men have to endure at this hour, he would form an entirely different opinion of what the moulder has to contend with. Often he has to go out into the cold winter air, with his clothes as wet as if he had been pulled out of a river, to reach the closets. There should be proper rooms for bathing and drying his wet clothes after a cast.

No. 55.—Our members would like the Government to pass a law for the hours for all public labour to be 5 on Saturday.

No. 70.—All foundries should be furnished with bath-rooms, closets, and proper ventilation, and a law should be passed to that effect.

No. 80.—Our union endorses the establishment of a Labour College, similar to Ruskin College, Oxford, England, where economics, history, sociology, and psychology would be the chief subjects, in order to educate the men's leaders and future labour members of Parliament. We think the prohibition of cut stone brought into a district from another where the wages are lower would be a good thing for our trade.

No. 113.—Our members consider it would be a good thing for the public welfare if there was a Government sanitary law to govern plumbing, as some of the work done in Ontario is not fit to be called plumbing, and is a danger to the health of the people.

No. 115.—We want and are looking for superannuation on an equalized basis, in order that all letter carriers may have the same benefits and the same privileges in regard to superannuation.—This is, of course, a Dominion matter. Secretary, Labour Bureau.

No. 125.—Our union thinks that for the safety of the travelling public legislation should be passed prohibiting any railroad operator, who has anything to do with the handling of train orders, from working more than 8 consecutive hours per day. It should be made a criminal offence for any railroad company to work their telegraph operator handling train orders more than 8 hours a day.

No. 133.—In every clothing centre there are hundreds of homes where clothing is manufactured. Our local union is of opinion that a lady inspector should be employed in each clothing centre to investigate the conditions under which the clothing is made, and that every firm should give a list of their workers at home to such inspector. The factory inspectors do not do this work.—This is the sphere of the Inspectors' Branch, Department of Agriculture.

No. 146.—We think that an 8 hour day is what is most urgently required by the telegraphers of the country, not only in the interest of members of the craft, but in the interests of the travelling public as well. We believe that a 12 hour day is too long for an individual, handling such responsibility, to be on duty, considering a great number work on Sundays as well as other days, nor can we see any just reason why the telegraphers of Ontario, or of Canada, should not work under as favourable conditions as they do in the United States, where a 9 hour law exists, with practically the same salaries as for the 12 hour day in this country.

No. 191.—In our opinion evening technical classes would do an immense amount of good here, and we believe they would be well patronized.

No. 192.—A universal 8 hour day is generally desired in our local union, together with a stricter inspection of machine shops, stationary engines and boilers. Also the establishment here of a branch of the Bureau of Labour, as in Hamilton, etc.

No. 200.—Proper ventilation and installing of bath rooms would be a great benefit to moulders, but we have here no complaint as to ventilation.

No. 207.—We would suggest that all Government work should be inspected by competent inspectors pertaining to each trade.

No. 221.—Our union believes that all apprentices should serve three years at the trade and should pass an examination before a provincial board composed of two barbers and one doctor, who should issue a license to work at the trade of barber, as in Michigan.

No. 266.—We are of opinion that the City of Toronto should be authorised to pass by-laws compelling each and every individual to obtain a license before operating or having charge of any steam boiler or engine, known as hoisting and portable engines, carrying 5lbs. of live steam or over that, if in use on buildings or highways or any construction work in the city. This would greatly reduce the number of casualties caused by incompetent men, of which we have had experience in the past year.

No. 269.—Our union believes that every man should be compelled to show that he understands the anatomy of a horse's foot and leg before he is allowed to compete in horse-shoeing with those who do.

No. 286.—In the judgment of our members it would be in the interest not only of our trade but also of the public that there should be a Board of Examiners in the Province to license plumbers, and a uniform system of inspection of plumbing throughout Ontario.

No. 297.—We believe that it would be for the benefit of the clothing trades that the making of clothing in private houses should be abolished, or, at least, that a system of inspection should be instituted. Something in this line should be done in the interest of the public.

No. 301.—Commercial telegraphy is a nerve-exhausting work, and the hours are too long for this kind of work. Operators are sometimes required to work eight and a half hours at a stretch without lunch relief. Regular day hours are nine hours with half an hour for lunch.

No. 314.—We are hoping to see a good pension for old age, male and female, put into effect.

No. 317.—We are in favour of an 8 hour day on Government contracts, Provincial and Federal, and a stricter enforcement of the Alien Labour Law. Our recent experience is that the fair wage clause in Government contracts is and always will be farcical unless a severe fine is imposed on delinquent contractors. We believe a start should be made to fetch old age pensions into line with those of Great Britain; also that more comprehensive Employers' Liability and Workmen's Compensation Acts are greatly required.

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Allandale:					
Brotherhood of Locomotive Firemen and Enginemen, No. 442	Geo. St. Louis...	Allandale	H. Hodsden	Allandale	2nd Sunday, 2.30 p.m. 4th Wednesday, 7.30 p.m.
Alliston:					
International Brotherhood of Maintenance of Way Employees (C.P.R.), No. 217 ..	Chas. Trinkman.	Coldwater P. O.....	J. W. Bone	Palgrave P.O.	3rd Saturday.
Amherstburg:					
International Rock Drillers' Union, No. 504	John Dickey	864 Glenwood Ave., Buffalo, N.Y.	Lemuel A Parker	Amherstburg	Mondays, 2.30.
Aurora:					
American Federation of Musicians No. 335	Fred. D. Waite...	Mosley St.....	J. E. Querrie ..	Aurora	1st Monday.
Belleville:					
Bricklayers', Masons' and Plasterers' International Union, No. 30	Thos. Waymark..	Herkimer Ave.	Albert Aylmes ..	55 Catherine St.	1st and 3rd Mondays.
Brotherhood of Locomotive Firemen and Enginemen, No. 66	Alfred Calcutt..	Belleville Station	Robt. J. Milne ..	Belleville Station	2nd and 4th Sundays.
Brotherhood of Locomotive Engineers, No. 189.....	T. Marshall	Belleville Station	H. Lavole	Box 34, B. Station P.O.	1st and 3rd Sundays.
United Association of Plumbers, Gasfitters, etc., No. 411.	D. Marsh	Belleville	W. Cronk	411 Front St.	Fridays.
Brotherhood of Painters and Decorators of America, No. 86	Bruce Loucks....	Boswell St.	C. F. Cochrane ..	Pinnacle St.	1st and 3rd Mondays.
Blenheim:					
International Brotherhood of Maintenance of Way Employees, No. 502	Arthur Mansell..	Blenheim West	Alex. Martin	Blenheim	Last Saturday.
Brantford:					
United Brotherhood of Carpenters and Joiners of America, No. 498	Wm. D. Gardiner.	160 Murray St.	Joseph Swift	292 Park Ave.	2nd and 4th Tuesdays.
Amalgamated Society of Carpenters and Joiners, No. 783	W. S. Jago	St. Paul's Ave.	J. C. Coles	150 Wellington St.	Alternate Mondays.

Journeymen Tailors' Union of America, No. 117	Wm. Kenzie	Terrace Hill St.	R. J. Campbell	Box 252, Brantford	4th Tuesday.
Operative Plasterers' International Union, No. 164	Thos. Thompson.	Box 115, Brantford	Alf. D. Bennett.	Brantford P.O.	Alternate Thursdays.
Journeymen Barbers' International Union, No. 298	Jas. Rice	5 George St.	Thos. Linscott	248 Colborne St.	Last Monday.
Cigarmakers' Union, No. 59	A. Crandall	29 Mohawk St.	Frank Mather	75 Greenwich St.	3rd Tuesday.
Moulders' Union, No. 29	John Sloan, Jr.	Brantford	C. J. Crowley	471 Colborne St.	Alternate Mondays.
Bartenders' International League, No. 182	Alfred Smith	Kenby House	Thos. McCusker	Bodega Tavern	Last Sunday.
Bricklayers' and Masons' International Union, No. 9	T. T. Cooper	10 Lawrence St.	B. E. Pearcey	74½ Erie Ave.	Alternate Thursdays from January 13.
Journeymen Plumbers, Gasfitters, etc., No. 186	J. R. Heatley	50 Balfour St.	Jas. W. Crowcher	51 Church St.	2nd and 4th Wednesdays.
Brotherhood of Painters and Paperhangers, No. 313	Tho. Hill	9 Marlborough St.	P. H. Jones	93 Arthur St.	2nd Monday.
United Brotherhood of Carpenters and Joiners	W. D. Gardiner	160 Murray St.	Jos. Swift	292 Park Ave.	2nd and 4th Tuesdays.
Berlin:					
Journeymen Tailors' Union of America, No. 264	Otto A. Stanch	83 St. Georgt St.	Anna Wuest	104 College St.	1st Tuesday.
Canadian Association of Stationary Engineers, No. 9	Peter Uttley	Berlin	C. Emmrich	Berlin	2nd and 4th Wednesdays
Cigarmakers' International Union, No. 422	Leo. Sobisch	Waterloo	Steve Welheuser.	150 East King St.	2nd Wednesday.
Federal Labour Union, No. 17.	Fred. Ackerknecht	Frederick St., North	Otto H. Zimmer	17 Cameron St. North	1st and 3rd Thursdays.
Musicians' Protective Association	E. C. Schultz	18 Brabacher St.	G. A. Albrecht	149 Wellington St.	1st Tuesday.
United Brotherhood of Carpenters and Joiners, No. 553	R. F. Softon	Joseph St.	Peter Jacobs	106 Wellington St.	1st and 3rd Friday.
Boot and Shoe Workers' Union, No. 206	G. P. Blood	155 Margaret Ave.	A. J. Dammon	21 Albert St.	2nd and 4th Friday.
Upholsterers' International Union, No. 42	A. R. Nichol	Waterloo	J. D. Wothespoon	86 Wilhelm St.	1st and 3rd Mondays.
Hodcarriers' International Union, No. 160	Wm. Benedick	Berlin	Geo. Hofmann	58 Homewood Ave.	1st and 3rd Wednesdays
International Typographical Union, No. 366	Fred. Pollokowski	94 Wellington St.	Harry Delion	62 Frederick St.	2nd Mondays.
Brewery Workers' International Union, No. 170	Jacob Seibel	29 King St. West	Menno Dahmer	Box 443, Waterloo	2nd and 4th Wednesdays
Bricklayers', Masons' and Plasterers' International Union, No. 12	Nick Asmussen.	188 Benton St.	Arthur Plummer.	108 Weber St., East	Every Friday.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Bridgeburg:					
Brotherhood of Railway Carmen, No. 10	....	.....	A. Merryweather.	Bridgeburg	....
Brockville:					
Bartenders' International League, No. 308	Thos. Christopher	Revere House	Albert Dowdall ..	Strathcona Hotel	Sunday morning.
Order of Railway Conductors, No. 366	R. A. Dickson....	Brock St., West.....	Geo. M. Pinnock.	63 John St., Box 707 ...	1st Monday.
Brotherhood of Locomotive Firemen and Enginemen, No. 69	R. H. Weir	Brockville	F. C. Race	Brockville	Thursday, 1.30 p.m
Brotherhood of Locomotive Engineers, No. 118	E. Mortimer	Brockville	R. Wardrop	Brockville	Tuesdays.
United Brotherhood of Carpenters and Joiners, No. 799	E. J. Byrne.....	Box 896	W. Hasting	Perth St., Brockville ..	Every Thursday.
Carleton Place:					
International Moulders' Union of North America, No. 362	John McQuaig...	Carleton Place	J. R. Robertson .	Box 292	1st and 3rd Thursdays.
International Association of Machinists, No. 211	G. Grant	Victoria St.	J. H. McFadden .	Box 326	2nd and 4th Thursdays.
International Brotherhood of Blacksmiths, No. 424	Thos. Abernethy.	Carleton Place	R. G. Curtis	Carleton Place, Box 224	4th Saturday.
Bricklayers' and Masons' International Union, No. 28	P. McGregor	Joseph St.	A. B. Hamilton ..	Joseph St.	2nd and 4th Tuesdays.
Collingwood:					
Bricklayers' and Masons' International Union, No. 19	Edwin Chamberlain	Collingwood	Willis Court	Box 797	3rd Wednesday.
Journeymen Barbers' Union, No. 536	Leonard Frier...	Huron St.	Fred. Bollen	Hurontario St.....	1st and 3rd Mondays.
International Union of Steam Engineers, No. 521	John Bannon ...	Collingwood	E. J. Mallen	Collingwood	1st Monday.
International Longshoremen's Association, No. 476	Benj. Barnes ...	Ste. Marie St.	Ernest Johnston	Beach St.	1st and 3rd Thursdays.
Cornwall:					
Journeymen Tailors' Union of America, No. 355	T. Dalbec	Fifth St. East	Chas. Stafford ...	Second St., East	1st Monday.

Chapleau:					
Independent Brotherhood of Maintenance of Way Employees, No. 237	H. C. Mulligan...	Chapleau	.....	.....	.....
Brotherhood of Locomotive Firemen and Enginemen, No. 321	J. F. Burns	Chapleau	Simon Kruger ..	Chapleau	Every Wednesday, 1.30 p.m.
Brotherhood of Locomotive Engineers, No. 319	Jas. Rose	Chapleau	B. S. McLennan .	Box 77	Every Monday, 2 p.m.
Dundas:					
International Moulders' Union, No. 269	Jas. Smith	Dundas	Wm. Watts	Box 315	3rd Monday.
Elk Lake:					
Western Federation of Miners, No. 140	Patrick Cashman.	Box 348	Chas. H. Lowchian	Box 348	Sundays.
Essex:					
International Brotherhood of Maintenance of Way Employees, No. 312	.....	.....	P. Diltz	Box 322	2nd and 4th Tuesdays.
Fort Frances:					
United Brotherhood of Carpenters and Joiners of America.	Jas. Wallace	Fort Frances	A. E. Blows	Fort Frances	1st and 3rd Monday.
Fort William:					
International Longshoremen's Association (Grain Trimmers), No. 479	T. Hall	19 Ontario St.	John Murie	131 John St. South	Periodical.
Brotherhood of Boilermakers, Iron Ship Builders, etc., No. 505	Fred. Stafford...	318 Ogden St.	Wm. Morris	335 Ogden St.	Unsettled.
International Brotherhood of Maintenance of Way Employees, No. 128	P. J. Watson.....	429 S. Archibald	Albert Rowe	114. N. Harold St.	4th Saturday.
International Longshoremen's Association (Coal Handlers), No. 746	....	.....	G. E. Boss	Fort William	3rd Wednesday.
Order of Railway Conductors, No. 286	D. H. Beaton ...	436 Syndicate Ave. ...	A. B. Marcotte ..	439 Wiley St.	2nd and 4th Sunday, 4.30.
International Moulders' Union, No. 429	Wm. Fleming, Jr.	Fort William	F. Christianson .	34 Ruttan St., Port Arthur	4th Saturday.
American Federation of Labour, No. 12,799	Samuel Palma...	McTavish St.	Herbert Slater ..	523 Wiley St.	3rd Wednesday.
Amalgamated Society of Carpenters and Joiners, No. 787	Arthur Watkins..	409 Wiley St.	H. Edwards	138 S. Franklin St.	1st and 3rd Mondays.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Galt:					
International Moulders' Union, No. 447	A. A. Lanigan...	Galt	David Melvin ...	Box 356	1st and 3rd Mondays.
Typographical Union, No. 411.	Frank Herschell.	North Water St.	J. J. Turnbull ...	24 Forbes St.	1st Tuesday.
Journeymen Barbers' International Union, No.	Herb. Carter.....	South Water St.	Jas. A. Allan	Cor. Dickson and Water Sts.	Last Thursday.
Amalgamated Society of Engineers, No. 666	Sam. Schofield...	Galt	C. J. Aitken	Galt.	Alternate Wednesdays from January 5.
American Federation of Musicians, No. 124	Wm. Ewart	Galt	P. G. Ruppel	Walnut St.	1st Tuesday.
Guelph:					
International Moulders' Union, No. 212	Freeman Felker..	St. Arnod St.	J. R. Thatcher ..	47 Inkerman St.	1st and 3rd Fridays.
Bricklayers' and Masons' International Union, No. 3	Israel Teeple.....	Stuart St.	John Gould	107 Alma St.	2nd and 4th Thursdays.
Brussel Carpet Weavers' Union, No. 277	A. Holzman.....	57 Toronto St.	Thos. Hall	17 Hooper St.	3rd Monday.
Typographical Union, No. 391	Alf. E. Humphries	Dublin St.	C. P. Doughty ...	175 Neeve St.	2nd Monday.
Piano and Organ Workers' International Union, No. 34..	J. Brohman	Kent St.	Geo. Cutting	127 Paisley St.	1st and 3rd Thursdays.
Hamilton:					
Boot and Shoe Workers' Union, No. 228	Jos. Gimblett....	73 Oxford St.	H. Harrison	43 Melbourne St.	3rd Tuesday.
Boot and Shoe Worker's Union, No. 234	Mrs. Thirza Epps.	13 Aikman Ave.	Marg't Ballantyne	192 Bold St.	4th Thursday.
International Alliance of Stage Employees, No. 129	Wm. Metson	Dundas P. O.	Geo. Elville	66 Simcoe St. West	4th Sunday.
Sheet Metal Workers' International Alliance, No. 61 ..	Rich. Marsh.....	342 East Ave. N.	Chris. H. Hotham	145 E. Wood St.	1st and 3rd Fridays.
Musicians' Protective Association, No. 293	A. J. Milligan....	81 Picton St. E.	Jos. Gimblett ...	73 Oxford St.	2nd Sunday.
Order of Railway Conductors, No. 27	Jas. McMahon....	198 Gibson Ave.	J. E. Oldfield	150 Catherine St.	1st and 3rd Sundays.
Typographical Union, No. 129.	Jas. T. Bonner...	Herald News Depart...	J. J. Bains	115 East Murray St.	2nd Wednesday.
Stove and Steel Range Mounters' International Union, No. 35	Albert Reid.....	33 Spring St.	Thos. Bevers	35 Tisdale St.	1st Monday.

Journeymen Barbers' International Union, No. 131	Wm. McOaid	107 James St. North	H. J. Halford	59 John St. S.	1st and 3rd Mondays.
Federated Labour Union, No. 11	D. S. McCarthy	Park St. North	Jas. Holman	351 Wellington St. N.	1st Monday.
Brotherhood of Railway Trainmen, No. 226	W. R. Campbell	17 Crook St.	Arthur Smith	19 Melbourne St.	2nd and last Sunday, 2 p.m.
Journeymen Horseshoers' International Union, No. 72	W. R. Allen	13 Caroline St.	A. N. Decker	83 Smith Ave.	
International Broom and Whisk Makers' Union, No. 9	Walt. Armstrong.	66 New St.	W. H. McAdam	90 Catherine St. S.	2nd Monday.
Brotherhood of Railway Carmen	J. L. McIntyre	39 Palace St., Brantf'd.	A. E. Wilson	291 Barton St. N.	3rd Sunday.
Journeymen Stonecutters' Association of North America.	Geo. Campbell	607 Main St. E.	W. H. Jenkins	10 Stinson St.	2nd and 4th Thursdays.
Brotherhood of Locomotive Engineers, No. 133	Jas. Allen	298 Lock St.	A. A. Griffith	81 Murray St.	2nd and 4th Sunday afternoon.
Amalgamated Society of Carpenters and Joiners, No. 789	Archie Burton	46 Garfield Ave.	F. H. Smith	18 Ardvorlich St.	Alternate Mondays.
Printing Pressmen's Union, No. 176	Wm. Brooks	Duncan Printing Co.	Alf. W. Wilkes	38 Ashley St.	4th Friday.
Painters' and Decorators' International Union, No. 205	S. J. Cowan	22 Gore St.	F. J. Dwyer	84 Murray St. E.	1st and 3rd Mondays.
Amalgamated Society of Engineers	S. Clarke	64 Frances St.	R. C. Paterson	187 Napier St.	Alternate Fridays from September 16.
Boot and Shoe Workers' Union, (Cutters), No. 232	Jos. Lee	78 Ray St. S.	John Wright	123 John St. S.	4th Friday.
Cigar Makers' Union, No. 55	C. J. Meaden	11 McNeil St.	T. Hough	170 Duke St.	Mondays.
Amalgamated Association of Street and Electric Railway Employees, No. 107	J. T. Burrows	84 Lock St. N.	Alex. Lamon.	Box 208	1st and 3rd Saturdays.
Metal Polishers', Buffers', etc., Union	Wm. Dewart	317 Cannon St. E.	J. Wooldridge	172 Catherine St. S.	1st and 3rd Wednesdays.
Journeymen Tailors' Union of America	James Lennie	Aberdeen Ave.	Harry Eicoff	Lock St. N.	Last Monday.
United Brotherhood of Leather Workers on Horse Goods, No. 158	J. A. Muir	33 Nightingale St.	A. Edgeler	81 Wellington St. S.	1st and 3rd Fridays.
Tobacco Workers' International Union, No. 48	Thos. Finagin	32 Park St. N.	A. H. Broughton.	22 Hunt St.	2nd and 4th Mondays.
Ingersoll:					
Brotherhood of Maintenance of Way Employees, No. 503	M. Sprague	Ingersoll	D. McCord	Belmont	Call of President.
Jack Fish:					
Brotherhood of Maintenance of Way Employees	John Lerwill	Heron Bay	A. Bianconi	Jack Fish	Last Saturday.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Kingston:					
Hod Carriers' and Building Labourers' Union, No. 66...	D. Dougherty....	469 Division St.	A. C. Smith	469 Division St.	1st and 3rd Wednesday.
Masters' and Mates' Association	Capt. Edw. Booth	172 Alfred St.	Geo. Hunter	298 Collingwood St. ...	None in Summer.
Lake Seamen's Union	Chairman of Meeting	Elected	T. H. Fleming ...	Box 96	Mondays.
Journeymen Tailors' Union of America, No. 263	Robt. Alexander..	451 Albert St.	Jos. Sauve	101 Queen St.	1st and 3rd Mondays.
United Brotherhood of Carpenters and Joiners, No. 249	H. Dowler	Barriefield	W. H. Hubble ...	26 Quebec St.	2nd and 4th Mondays.
Bricklayers', Masons' and Plasterers' International Union No. 10	Alex. McCartney.	250 University Ave. ...	Alex. Fowler	323 Johnston St.	2nd and 4th Tuesdays.
National Association Marine Engineers, No. 4	Rich. Taylor	90 Lower Bagot St.	Jas. Gillie	97 Clergy St. W.	Mondays.
Journeymen Barbers' International Union of America, No. 514	Geo. Lewis.....	347 Princess St.	W. J. Lemmon ..	377, King St.	Last Monday.
Brotherhood of Painters, Decorators and Paparhangers, No. 114	Jos. Mulholland..	15 Main St.	Wm. Veale	Nelson St.	1st and 3rd Mondays.
London:					
United Association of Plumbers and Steamfitters, No. 289	Geo. Watts.....	Ealing P. O.	G. F. Avey	189 Waterloo St.	1st and 3rd Tuesdays.
Journeymen Stonecutters' Association of America	Jabez Mason.....	Colbourne St.	Hugh Boyd	875 Adelaide St.	....
Federated Association of Letter Carriers, Branch 4	Chester Fitzgerald	161 Princess Ave.	W. M. Empey ...	573 Oxford St.	1st Tuesday.
Brotherhood of Locomotive Firemen and Enginemen, No. 268	Jas. Davis.....	51 Miles St.	Chas. Phipps	593 Princess Ave.	2nd and 4th Sundays, 2 p.m.
Cigar Makers' Union, No. 278.	Joe Kelly.....	754 Walker St.	Wm. Heslop	52 Blackfriars St.	1st and 3rd Tuesday.
Brotherhood of Railway Trainmen, No. 415	Peter Kelleher ..	51 Palace St.	W. H. Nichol	896 Princess Ave.	....
American Federation of Musicians	A. W. Slatter.....	432 Dundas St.	C. N. Perrin	352 Adelaide St.	4th Sunday.

Amalgamated Society of Carpenters and Joiners, No. 792	Wm. Ellis	20 Alexander St.	John Tanton	379 Waterloo St.	2nd and 4th Wednesday.
Canadian Association of Stationary Engineers, No. 30	D. F. Campbell	114 Askin St.	J. R. Stephenson.	35 Egerton St.	Every Tuesday.
Amalgamated Society of Engineers, No. 669	A. McDonald	867 Waterloo St.	Geo. H. Scollick	583 Grey St.	Alternate Fridays.
Brotherhood of Railway Trainmen, No. 75	Andy Maxwell	307 Grey St.	D. E. Patterson	124 Hamilton Road	2nd and 4th Sundays, 2.30 p.m.
International Association of Bricklayers and Masons, No. 5	S. H. Foxworthy.	712 Colbourne St.	Frank C. Pierce	659 King St.	2nd and 4th Wednesday.
Order of Railway Telegraphers (G.T.R.), No. 1	J. A. Bell	Callender	D. L. Shaw	427 William St.	Call of Chairman.
Metal Polishers, Buffers, etc., No. 32	D. H. Wright	378 Burwell St.	J. Cummings	Chelsea Green P.O.	2nd and 4th Fridays.
Bartenders' International League, No. 137	Geo. Parker	Tecumseh House	H. G. Edsall	58 Colborne St.	2nd and 4th Sundays.
International Brotherhood of Maintenance of Way Employees, No. 195	D. Walsh	431 Piccadilli St.	D. Campbell	10 Thornton St.	Last Saturday.
Journeymen Tailors' International Union, No. 30	Robt. Kidner	York St.	Jas. G. Hussey	241 Colborne St.	3rd Monday.
Printing Pressmen and Assistants' union, No. 173	Jas. Flory	Grosvenor St.	A. G. Watson	467 Simcoe St.	1st Saturday.
Typographical Union, No. 133.	A. C. Flowers	Cor. William St. & Pall Mall	Wm. O. Ruse	14 Walnut St.	1st Saturday.
Boiler Makers' and Iron Ship Builders' Union, No. 203	Wm. Stinson	875 Elias St.	Harry Kebbler	811 Central Ave.	2nd and 4th Wednesdays
United Garment Workers' Union, No. 33	Miss McDonald	179 John St.	A. H. Carroll	328 York	4th Friday.
United Brotherhood of Carpenters and Joiners	R. A. Baker	32 Emery St.	Morley Forsythe	388 Ridout St.	2nd and 4th Tuesdays.
Journeymen Barbers' International Union, No. 366	John Frezell	611 Dundas St.	J. E. Secker	713 Richmond St.	4th Monday.
International Alliance Theatrical Stage Employees, No. 105	S. Loughrey	37 Beecher St.	R. Whitton	135 Albert St.	1st and 3rd Sundays.
Lindsay:					
Brotherhood of Locomotive Engineers, No. 174	Geo. Morsey	Melbourne St.	Thos. Wilkinson	Cambridge St.	2nd and 4th Sundays, 2 p.m.
Brotherhood of Locomotive Firemen and Enginemen, No.	Chas. Golden	Box 212	Wm. Graham	Box 212	2nd and 4th Sundays.
Midland:					
International Longshoremen's Association, No. 199	Geo. McMullen	Midland	D. A. Hall	Midland	1st and 3rd Tuesdays.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Niagara Falls:					
Amalgamated Society of Carpenters and Joiners, No. 797	J. Heding	Niagara Falls	H. Bromhall	95 McGrail Ave.	1st and 3rd Fridays.
Journeymen Stonecutters of North America	L. P. Anderson...	St. David's, Ont.	Chas. W. Anderson	44 Benson St.	1st and 4th Wednesdays
North Bay:					
Maintenance of Way Employees, No. 244	A. B. Lowe.....	3900 Olive St., St. Louis, Mo.	.....	.....	Last Saturday April and alternate months.
Brotherhood of Railway Trainmen, No. 249	C. D. St. Germain	North Bay	Robt. Dingwall ..	Box 535	2nd and 4th Thursdays, 2.30 p.m.
Order of Railway Conductors, No. 242	R. Flegg	North Bay	H. A. Washburn..	Box 602	2nd and 4th Mondays.
Order of Railway Telegraphers (Cobalt Div.), No. 99	J. H. Shisley.....	Haileybury	R. Workman.....	Box 969	Call of Chairman.
Brotherhood of Railway Carmen, No. 192	Wm. Legge.....	North Bay	H. G. Wright....	Box 487	4th Friday.
Oshawa:					
International Moulders' Union, No.136	Archie Robinson.	Oshawa	R. H. Rogan.....	Box 144	3rd Thursday.
Orangeville:					
International Brotherhood of Maintenance of Way Employees, No. 214	R. McIntosh.....	Owen Sound	D. McDougall....	Fergus	Last Saturday of March, June, October, Dec.
Ottawa:					
Brotherhood of Locomotive Firemen and Enginemen, No. 81	W. Landymore...	103 Lees Ave.	J. Eldridge.....	69 Frank St.	2nd and 4th Thursdays.
Bricklayers' International Union, No. 17	Rich. Reardon....	89 Lloyd St.	Alex. Findlay, Jr.	1131 Wellington St.	Every 2nd Monday.
Brotherhood of Railway Carmen of America, No. 230....	Ed. Conway.....	80 Merton St.	John L. Neill....	61 Pine St.	1st and 4th Thursdays.
Bricklayers', Masons', etc., International Union (Stonemason), No. 14	John Cameron...	74 Lloyd St.	M. Fleury.....	214 Patterson Ave.	Alternate Thursdays.
Operative Plasterers' International Association	J. R. Murphy.....	385 Elgin St.	Alf. Hopkins.....	297 Lisgar St.	Alternate Tuesdays.

Amalgamated Association of Street and Electric Railway Employees, No. 279	Jas. O'Brien	211 Slater St.	Fred Golding	125 Pretoria Ave.	1st and 3rd Fridays.
United Brotherhood of Carpenters and Joiners of America.	Louis Blouin	38 Sterling Ave.	Emery Belair	267 Clarence St.	1st and 3rd Wednesdays
Painters, Decorators and Paperhangers of America, No. 200	H. Herbst	40 Twiner St.	E. C. Brandt	57 Bayswater Ave.	1st and 3rd Tuesdays.
International Association of Machinists, No. 412	E. Newman	65 Anderson St.	H. E. Roche	75 Elm. St.	1st and 3rd Fridays.
International Moulders' Union of North America, No 280	Thos. Stanley	55 Ottawa St.	J. E. Bedard	155 Alma St. Hull, Que.	1st and 3rd Wednesdays
Order of Railway Conductors, No. 29	D. A. Howard	784 Somerset St.	J. B. Morris	305 Bronson Ave.	2nd and 4th Sundays.
Brotherhood of Railway Trainmen, No. 185	John Maloney	62 Henderson Ave.	H. H. Brown	539 Lyon St.	Alternate Sundays, 2 p.m.
Stereotypers' and Electrotypers' Union, No. 50	Thos. Hulme	309 Bell St.	W. R. Hague	139 Henderson Ave.	1st Saturday.
Brotherhood of Railway Trainmen	A. E. Salmon	49 Rochester St.	W. A. Perry	1 Elm St.	1st and 3rd Sundays.
Stonecutters' International Association of North America.	D. Nelson	Gladstone Ave.	J. W. Thomson	274 Turner St.	2nd and 4th Wednesdays
International Steel and Copper Plate Printers' Union, No. 6	M. J Kelly	63 Bell St.	Edw. J. Lane	229 Lisgar St.	1st Friday.
Sheet Metal Workers' International Alliance, No. 47	J. W. Morgan	30 Sherbrooke Ave.	J. M. Bond	86½ Third Ave.	1st and 3rd Wednesdays
International Typographical Union, No. 102	Mich. Powell	283 Kent St.	Wm. C. Blount	Box 491	1st Saturday.
International Alliance of Theatrical Stage Employees, No. 95	J. Thebault	249 Albert St.	H. G. Haig	358 Albert St.	1st Sunday, 2.30 p.m.
Printing Pressmens' Union, No. 5	Fred. Thomas	565 McLaren St.	Alf. J. Larden	327 Bell St.	2nd Monday.
Hodcarriers' and Building Labourers' Union, No. 32	Jas. Abbott	Billings Bridge P. O.	M. J. O'Connor	114 Eccles St.	2nd. and 4th Tuesdays.
Press Feeders' and Assistants' Union, No. 9	W. A. Jacques	159 Freel St.	Orp. Bureau	87 Ann St., Hull, Que.	2nd Monday.
International Brotherhood of Teamsters (Cab Drivers), No. 192	C. Kelly	Florence St.	A. Renard	140 Dalhousie St.	1st Sunday.
Butchers' and Meat Cutters' Union, No. 464	Jas Usher	231 Arlington St.	Thos. Schofield	Ottawa	1st and 2nd Wednesdays

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Ottawa.—*Con.*					
International Brotherhood of Carpenters and Joiners, No. 93	....	....	E. Belairs.....	263 Clarence St.	1st and 3rd Wednesdays
United Brotherhood of Leather Workers on Horse Goods, No. 162	A. W. Chester....	126 Lyon St.	Patrick Burk....	126 Lyon St.	1st and 3rd Tuesdays.
Plumbers' and Steamfitters' United Association, No. 71..	Jos. Hurtubise...	254 Water St.	Chas. Smith	504 McLeod St.	2nd and 4th Wednesdays
International Hodcarriers and Plasterers' Labourers' Union, No. 235	A. Bethell.....	Westboro P. O.	H. Bassam.....	444 Gladstone Ave.	2nd and 4th Thursdays.
Amalgamated Society of Carpenters and Joiners, No. 826	Chas. Banks.....	Bank St.	Geo. Wild	86 Hamilton Ave.	1st and 3rd Thursdays.
International Hodcarriers' and Builders' Labourers' Union, No. 32	G. Howlett.....	310 Gladstone Av.	C. Plumb	310 Gladstone Ave.	Alternate Tuesdays.
Gas Stokers' Union	Wm. Baxter.....	Ottawa	P. B. Buchell....	Ottawa	....
Amalgamated Society of Carpenters and Joiners, No. 824	P. McAnish.....	600 Gilmour St.	Geo. Wild	86 Hamilton Ave.	Alternate Thursday.
Owen Sound:					
Bricklayers' and Mason's International Union, No. 11	Chas. Leathbridge	Box 233	Geo. A. Parkins..	Box 561	Every Wednesday.
Journeymen Stonecutters' Association of North America ...	Dew. Fraser.....	Box 345, Fifth St. E....	Edw. Gaskell.....	1132 Fourth Ave. E....	2nd Friday.
Palmerston:					
Order of Railway Conductors, No. 492	A. B. Garratson..	Cedar Rapids, Iowa....	P. W. Cordingley	Box 4	2nd Sunday.
Brotherhood of Locomotive Firemen and Enginemen, No. 181	Thos. A. Smith...	Palmerston	H. W. Ladd.....	Palmerston	1st and 3rd Sundays.
Peterborough:					
Journeymen Barbers' International Union of America, No. 402	J. E. Kelly.....	164 Simcoe St.	M. H. Gainey....	423 George St.	3rd Monday.
Typographical Union, No. 248.	E. H. Bartlett....	Peterboro' Times	G. A. Hamon....	573 Rogers St.	2nd Saturday.

Journeymen Stonecutters' Association of North America.	I. M. Halliday....	McDonnell St.	Geo. Wooton.....	280 McDonnell St.	....
Bricklayers' and Masons' International Union, No. 17	M. B. Fredericks.	Harvey St	Wm. Stevens.....	Box 778	2nd and 3rd Tuesdays.
Brotherhood of Painters, Decorators and Paperhangers, No. 379	.....	.....	.....	.....	.....
Port Arthur:					
International Moulders' Union, No. 429	Wm. Fleming, Jr.	432 S. Mark St. Fort William	F. W. Christianson	34 Ruttan St.	4th Saturday.
Wood, Wire and Metal Lathers' International Union, No. 223	F. M. Mayolle....	307 S. Mark St., Fort William	J. W. Archer.....	36 Algoma St.	1st and 3rd Thursdays.
United Association of Plumbers and Steamfitters, No. 378 ...	L. McArthur.....	Jean St.	J. C. Vincent.....	36 Algoma St. S.	2nd and 4th Fridays.
International Association of Machinists, No. 820	Geo. Stark.....	43 Court	And. Boyd.....	368 Wiley St.	1st Thursday.
United Brotherhood of Carpenters and Joiners of America, No. 285	Jas. A. Dunbar..	120 Peter St.	A. F. Manchee...	116 Jean St.	1st and 3rd Mondays.
Bartenders' International League, No. 757	H. J. Cassidy....	Port Arthur	Wm. Robinson...	9 Campbell Block	1st Sunday.
Amalgamated Society of Carpenters and Joiners	J. Fearon.....	328 St. Vincent St.	Sid. Wilson.....	96 Brent St.	1st and 3rd Thursdays.
Order of Railway Conductors, No. 536	W. J. Garrelson..	Cedar Rapids, Iowa ...	E. McGeagh.....	97 Algoma St. S.	2nd and 4th Mondays.
International Typographical Union, No. 515	E. G. Prior	Port Arthur	H. E. Temple....	Box 428	1st Saturday.
Journeymen Stonecutters of North America	Robt. Wishart....	306 Bay St.	Dun. Eaglesome.	306 Bay St.	3rd Tuesday.
Port Colborne:					
United Brotherhood of Carpenters and Joiners, No. 1,168..	Louis White.....	Humberstone	W. F. Cook.....	Port Colborne	1st and 3rd Mondays.
Port Hope:					
International Moulders' Union, No. 189	Walter Thomas..	Port Hope	Chas. A. McElroy.	Box 201	2nd and 4th Mondays.
Ridgemount:					
Order of Railway Telegraphers, No. 16 St. Catharines:.....	J. C. Culkins.....	Albion, Mich.	J. H. Staley.....	Ridgemount	Call of Gen. Chairman.
Amalgamated Society of Carpenters and Joiners, No. 61	W. Nicholson....	19 Wiley St.	W. Nicholson.....	19 Wiley St.	Alternate Thursdays.
United Brotherhood of Carpenters and Joiners, No. 38	R. H. Bradley....	138 Queenston St.	Jas. Carty.....	19 Cherry St.	Every Friday.
International Typographical Union, No. 416	Jas. Matheson...	Standard Office	Bert. Gadsby.....	16 Haynes Ave.	Last Monday.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
St. Catharines.—*Con.*					
Bricklayers', Masons' and Plasterers' International Union, No. 4	A. G. Broom	119 Geneva St.	C. G. Paley	48 Louisa St.	1st and 3rd Tuesdays.
Plumbers and Steamfitters International Union, No. 244	Rich. English	119 Geneva St.	Harry Oliver	31 Beech St.	Every Thursday.
Brotherhood of Painters, Decorators and Paperhangers, No. 407	E. E. A. Day	63 George St.	Wm. D. Outram	30 Nelson St.	2nd and 4th Wednesdays
Barbers' Union, No. 1	Y. M. Bessey	St. Paul St.	Adam Haynes	293 St. Paul St.	1st and 3rd Mondays.
Journeymen Tailors' Union of America, No. 235	S. Rogers	159 Church St.	Venner Fullerton.	140 Queenston St.	1st Monday.
International Cigarmakers' Union, No. 140	Wilfred Haynes	Cherry St.	Leo. T. Coyle	3 Court St.	1st Monday.
St. Marys:					
Journeymen Stonecutters' Association	Jim Clyde	St. Mary's	W. H. McCauley	St. Mary's	1st and 3rd Tuesdays.
St. Thomas:					
Journeymen Tailors' Union of America, No. 141	J. R. Snell	9 Isabel St.	Wm. Abernethy	32 Ross St.	4th Monday.
Order of Railway Conductors, No. 13	Geo. Hayes	18 Wilson Ave.	John Mackenzie	50 Gladstone Ave.	2nd and 4th Sundays.
International Association of Machinists, No. 294	Robt. Verner	7 Wilson Av.	J. J. Stewart	56 Redan St.	1st and 3rd Tuesdays.
Bricklayers' and Masons' Union, No. 8	John Anderson	Miller St.	Orlando J. Beal	83 Erie St.	2nd and 4th Wednesdays
Brotherhood of Railway Trainmen, No. 47	A. E. Hookway	638 Talbot St.	Herb. Sharp	2 John St.	Every Monday.
Amalgamated Association of Street and Electric Railway Employees, No. 488	M. R. Cook	Talbot St.	Ed. Potts	Street Railway	One Sunday in month
Sarnia:					
Order of Railway Conductors, No. 189	W. J. Cossey	390 Brock St.	H. Bell	288 Campbell St.	1st and 3rd Tuesdays.
Brotherhood of Locomotive Engineers, No. 240	Jas. S. Crawford	111 Brock St.	Jas. Copeland	140 Savoy St.	Alternate Thursdays.

Brotherhood of Locomotive Firemen and Enginemen, No. 221	Adam Frayne	Samuel Street	Edw. J. Blake	410 S. Christiana St.	1st and 3rd Tuesdays.
Journeymen Barbers' International Union, No. 467	Wm. Lumby	203 Christena St.	Wm. Knight	140 Cromwell St.	1st Tuesday.
Sault Ste. Marie:					
Brotherhood of Railway Trainmen, No. 611	L. B. Shank	Sault Ste. Marie	A. T. Goodell	Sault Ste. Marie	2nd and 4th Fridays.
Brotherhood of Locomotive Firemen and Enginemen, No. 606	Geo. Armstrong	Sault Ste. Marie, West.	Jas. Gordon	Steelton, Ont.	1st Wednesday, 8 p.m., 3rd Wednesday, 3 p.m.
Moulders' Union of North America, No. 391	.....	.....	Archie Lawson	Box 809	3rd Friday.
International Brotherhood of Maintenance of Way Employees	Wm. Warmsley	Echo Bay, Ont.	W. Jewkes	Garden River, Ont.	Last Saturday.
Brotherhood of Locomotive Engineers, No. 67	J. W. Clemingson.	John St., Steelton	A. C. Hagues	Murray St.	2nd and 4th Wednesdays
Schreiber:					
International Brotherhood of Maintenance of Way Employees, No. 260	T. Boster	Schreiber	W. Sparkes	Schreiber	Last Sunday.
Smith's Falls:					
Bricklayers' and Stonemasons' Union, No. 721	W. H. Rathwell	Smith's Falls	Adam Johnston	Box 231	2nd and 4th Wednesdays
Brotherhood of Railway Trainmen, No. 527	J. W. Thomas	Smith's Falls	A. M. Brown	Smith's Falls	1st Monday, 3rd Wednesday.
Stevensville:					
International Brotherhood of Maintenance of Way Employees, No. 328	Thos. Carser	Stevensville	Herb. W. Hann	Box 136	3rd Saturday.
Stratford:					
Order of Railway Conductors.	D. S. McHaffie	231 Ontario St.	R. T. Buchanan	37 Milton St.	2nd and 4th Sundays.
Brotherhood of Locomotive Firemen and Enginemen, No. 38	J. D. Smith	45 East Gore St.	J. F. Spencer	93 Nile St.	2nd Sunday, 2.30 p.m., 4th Tuesday, 7.30.
Cigar Makers' Union, No. 424.	M. Whalen	102 Grange St.	Jas. Hagarty	179 St. David St.	1st Wednesday.
Brotherhood of Locomotive Engineers, No. 188	Thos. J. Dolan	75 Bay St.	J. Battley	185 Douro St.	1st and 3rd Sunday.
Sturgeon Falls:					
International Brotherhood of Paper Makers, etc	Louis Huot	Sturgeon Falls	Alfred Dennison.	Sturgeon Falls	.....

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Thorold:					
United Brotherhood of Carpenters and Joiners, No. 1,677..	H. N. Higgins....	Thorold	F. Parmenter....	Box 224	3rd Thursday.
Toronto:					
Bakers' and Confectioners' International Union, No. 204..	Geo. Giles.....	23 Herrick St.	W. S. Murchie...	818 Dovercourt Rd.	1st and 3rd Saturdays.
Journeymen Barbers' International Union, No. 517.....	J. H. Brett.....	302 Robert St.	W. J. Rockett....	350 Queen St. W.	Last Thursday.
Bartenders' Union and Benevolent Society, No. 280.....	Frank Walker...	Grand Central Hotel...	A. O'Leary	Labor Temple	4th Sunday, 2 p.m.
Bill-posters' and Billers' International Alliance, No. 40...	J. McMillan	185 Bellwoods Av.	Roy E. Smith	11 Wellington St. E. ..	2nd Sunday, 3 p.m.
Boilermakers' and Iron Shipbuilders', No. 128.....	Chas. Rabey.....	57 Brookfield St.	Jas. Monaghan...	401 Montrose Ave.	2nd and 4th Fridays.
International Brotherhood of Bookbinders, No. 28.....	Geo. A. Gore.....	167 Lippincott St.	C. R. Hurst.....	4 Soho St.	2nd Monday.
International Union Boot and Shoe Workers, No. 233.....	Walt. Brown.....	22 Wascana Av.	Fred Crump.....	11 Clarence Sq.	Every Monday.
Brass Moulders' International Union, No. 207	Jas. Cann.....	347 Crawford St.	A. V. Mann.....	44 Geneva Ave.	1st and 3rd Wednesdays
United Brewery Workmen's Union, No. 304	Jos. Rutledge....	40 Clarmont St.	John D. Corcoran.	Labor Temple	2nd and 4th Fridays.
United Brewery Workmen's Union, No. 317, Maltsters...	John Seymour...	231 Manning Av.	Alf. Cheesman...	80 Greenwood Ave. ...	2nd and 4th Thursdays.
Bricklayers', Masons' and Plasterers' International Union, No. 2	H. Fussell.....	99 Balmoral Av.	R. A. Watson....	2 Reid St.	Every Tuesday.
Bridge and Structural Iron Workers, No. 4	S. Stafford	26 Winnifred Av.	W. B. Gracie.....	343 Symington Ave. ...	1st and 3rd Tuesdays.
Brussels Carpet Weavers, No. 695	Wm. Myatt.....	9 Alma Av.	A. H. Woodhead.	10 Alma Ave.	1st Friday.
Builders' Labourers' Union, No. 1	Sam. J. Cox.....	462 Gerrard St. E.	John M. Mackintosh	48 Humbert St.....	Every Tuesday.
Amalgamated Society Carpenters and Joiners, No. 802, Branch 1	Wm. Dodds.....	155 Baldwin St.	Arthur Barker...	Bertha St., Swansea ..	Alternate Mondays from January 10.

Amalgamated Society Carpenters and Joiners, No. 803, Branch 2	Alex. Gray	36 Adams Av.	Dav. Crombie	42 Cedarvale Ave.	Alternate Mondays from January 4th.
Amalgamated Society Carpenters and Joiners, No. 805, Branch 4	Thos Taylor	47 Geneva Av.	A. J. Udall	26 Howie Ave.	Alternate Mondays from January 3rd
Amalgamated Society Carpenters and Joiners, No. 807, Branch 6	Robt. Matthews	792 Queen St. E.	Walter Cooley	89 Tiverton Ave.	Alternate Tuesdays fror January 11th.
Brotherhood of Carpenters and Joiners of America, No. 27.	J. Scames	8 Maitland Place	W. H. Cordwell	39 Adams Ave.	1st and 3rd Fridays.
Brotherhood of Carpenters and Joiners of America, No. 1799	Alex. Suttie	9 Charles St. E.	Robt. Hayward	552 Clinton St.	1st and 3rd Thursdays.
Carriage and Wagonmakers' Union, No. 85	F. J. Sheild	42 Dagmar Av.	H. Gain	344 Clinton St.	1st and 3rd Wednesdays
Cigar Makers' International Union	J. McCarthy	118 Manning Av.	J. Pamphilon	88 Church St.	3rd Mondays.
Civic Employees' Benevolent Association, No	Geo. Byrl	83 Wolseley St.	Sam. Clark	177 Garden Ave.	2nd Wednesday.
Civic Park Employes', No. 1	R. J. Smith	76 Sheridan Av.	J. N. Spanton	9 O'Connell Ave.	Not Specified.
Clothing Cutters' and Trimmers' Protective Association, 185	Neil Gilchrist	77 Montrose Av.	H. A. Keller	59 Grange Ave.	2nd and 4th Fridays.
International Brotherhood of Electrical Workers, No. 114, Wiremen	J. Brodie	Toronto	F. Marsh	129 Manning Ave.	2nd and 4th Thursdays.
International Brotherhood of Electrical Workers, No. 353, Linemen	S. Waller	235 Salem Av.	W. J. Clayton	360½ Givens St.	1st and 3rd Wednesdays
Amalgamated Society of Engineers, No. 675	H. H. Ballantyne	105 Wilton Av. E.	J. M. Clements	650 Shaw St.	Alternate Mondays.
Amalgamated Society of Engineers, No. 676	Fred. O. Maker	186 Bartlett Av.	J. H. Eustace	121 Garden Ave.	Alternate Fridays from May 20.
Steam Engineers (Hoisting and Portable), No. 356	J. C. Maker	93 Monroe St.	Frank Palmer	525 Queen St. E.	1st and 2nd Wednesdays
United Garment Workers of America, No. 202	W. F. Bush	120½ Lippincott St.	W. G. Murray	220 Dunn Ave.	2nd Monday.
Glass Bottle Blowers' International Association, No. 66	Geo. Gardner	Diamond Glass Co.	Howard Munn	164 Argyle St.	2nd and 4th Saturdays.
Granite Cutters' International Association of America	Wm. Nettleship	Gibson Av.	Jas. Sieveright	882½ Yonge St.	4th Thursday.
Journeymen Horseshoers' International Union, No. 49	Jas. Flucker	561 Dupont St.	T. McKague	464 Gerrard St. E.	2nd and 4th Friday.

DIRECTORY OF LABOUR ORGANIZATIONS IN ONTARIO.—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Toronto.—*Con.*					
Wood, Wire and Metal Lathers' International Union, No. 97.	Avery Dearlove..	81 Yarmouth Road.....	Geo. Coffee.....	134 Sheridan Ave.	Every Tuesday.
United Brotherhood of Leather Workers on Horse Goods, No. 93	T. Palmer.....	116 Carson St.	Hugh McWha....	139 Bathurst St.....	1st and 3rd Tuesdays.
Lithographers' International Association, No. 12	Alex. Lennie.....	391 Carlton St.	Jas. H. Christie..	416 Manning Ave.	2nd and 4th Wednesdays
International Longshoremen's Association, No. 646	J. Dowling.....	35 Sackville St.	S. Stafford.....	49 Winnifred St.	1st Sunday, 2.30 p.m.
International Association of Machinists, No. 235	Rich. J. Young...	10 Russell Av.	J. O. Clayton.....	141 Sumach St.	2nd and 4th Wednesdays
Marble Workers' Union, No. 12	Wm. Mullin.....	10 William St.	L. W. Lang.....	73 Portland St.	1st and 3rd Thursdays.
Motion Picture Machine Operators' Union	Geo. Mihl	556 Church St.	W. A. Shank.....	42 Henderson Ave.	1st and 3rd Sundays.
International Moulders' Union, No. 28	Arth. J. McCauley	215 Howland Av.	Robt. Harris.....	110 Ossington Ave. ...	1st and 3rd Wednesdays
Musical Protective Association, No. 149	J. E. Jarratt.....	221 Dunn Av.	Jos. Ball.....	114 Augusta Ave.	1st Sunday, 2.15 p.m.
Brotherhood of Painters, Decorators and Paperhangers, No. 219	W. Stockdale....	684 Shaw St.	C. Hislop	6 Argyle St.	1st and 3rd Wednesdays
Brotherhood of Painters, Decorators and Paperhangers, No. 737	Chas. Watson....	973 Eastern Av.	J. G. Fitze.....	15 Clarke St.	2nd and 4th Wednesdays
Photo-Engravers' International Union No. 35	J. Egan.....	167 River St. 4	J. Robson	330 Gladstone Ave. ...	1st Monday.
Piano, Organ and Musical Instrument Workers Union No. 39	G. E. Manuel.....	136 Tecumseth St.	R. J. Whitton....	112 Russell Ave.	2nd and 4th Tuesdays.
Operative Plasterers' International Union, No. 48	Fred. Brooks....	709 Ossington Av.	Jas. Ward	150 Symington Ave. ..	2nd and 4th Thursdays.
Plasterers' Labourers' Association, No. 1	Rich. Mutter.....	96 River St.	Harry Tattersall	59 Albert St.	1st and 3rd Tuesdays.
United Association Plumbers, Gasfitters, etc., No. 46.....	F. P. Jenkins....	355 Delaware Av	E. Brittain	188 Sherbourne St.	2nd and 4th Fridays.
Web Pressmen's Union, No. 1..	Geo. Lambrix....	201 Simcoe St	Wm. Hart	201 Simcoe St.	3rd Monday.

Mailers' Union, No. 5	J. G. Gallagher	50 Beaconsfield Av.	E. McGarvey	41 N. Markham St.	1st Monday.
Typographical Union, No. 91	Sam. Hadden	110 Front St. E.	T. C. Vodden	137 First Ave.	1st Saturday.
Sheet Metal Workers' International Union, No. 30	John Lawson	Davisville P.O.	J. S. Chapman	294 Margueretta St.	1st and 3rd Fridays.
International Slate and Tile Roofers, No. 39	Jas. Hall	108 Claremont St.	Arth. Pullan	140 Hampton Ave.	1st and 3rd Mondays.
International Union Steam Engineers, No. 152	F. W. Barrow	421 Ontario St.	R. B. Shepherd	208 Wellesley St.	2nd and 4th Wednesdays
International Steam, Water, Gas and Power Pipe Fitters, No. 78	P. J. Smith	116 River St.	G. H. Milligan	287 Sumach St.	2nd and 4th Tuesdays.
Stereotypers' and Electrotypers' Union, No. 21	Ed. Young	290 Ontario St.	H. Bartley	973 Logan Ave	1st Thursday.
Journeymen Stonecutters' Association of North America	R. Geggie	2 Frankish Av.	Harry Newson	41 River St.	2nd and 4th Fridays.
Street Railway Employees Union	Wm. Murray	569 Dundas St.	Jos. Gibbons	Labor Temple	1st Monday, 8 p.m., 3rd Sunday, 2 p.m.
Journeymen Tailors' Union of America, No. 132	Geo. Sangster	68 Vermont Av.	Jas. Watt	Labor Temple	4th Monday.
Journeymen Tailors' Union of America, No. 156	Chas. Shore		M. P. Aitcheson	409 Woodville Ave.	1st Monday.
Team Owners' Association. No. 1.	Jos. Caldwell	33 Hamilton S.	J. Gosnell	102 Sherbourne St.	1st and 3rd Thursdays
International Brotherhood of Teamsters, (Coal) No. 457	John Notley	245 Lippincott St.	H. R. Barton	205 Sumach St.	1st and 3rd Sundays, 2.30 p.m.
Commercial Telegraphers' Union, No. 1, C. P. R.	C. E. Hill	362 Brock Av.	D. Warner	422 Ashdown Block, Winnipeg	Monthly.
International Stage Hands, No. 58	Robt. Newman	125 Carleton St.	J. E. Ferris	345 Huron St.	2nd Sunday.
Ceramic, Mosaic, Encaustic Tile Layers, No. 37	John McCarroll	389 Sorauren Av.	F. Parker	260 Brunswick Ave.	1st and 3rd Fridays.
Tobacco Workers' International Union, No. 63	Wm. Bugghey	292 Rogan Av.	John Keith	57 Marlborough Ave.	2nd Thursday.
Upholsterers' International Union, No. 30	W. J. Rielly	215 Bathurst St.	F. W. Prior	370 Margueretta St.	1st and 3rd Fridays.
Order of Railway Conductors, No. 17	J. D. McMallan	51 Fairview Av.	A. Riley	706 Markham St.	1st and 3rd Sundays.
Order of Railway Conductors, No. 345	Ed. Chapman	West Toronto	G. A. Wood	Empress Crescent.	2nd and 4th Sundays, 2.30 p.m.
Brotherhood of Locomotive Engineers, No. 70	H. Newcombe	190 Markham St.	I. Belyea	46 Bellevue Place	None.
Brotherhood of Locomotive Engineers, No. 690	D. J. Kerr	8 Enderby Road	T. J. Looney	2136 Gerrard St. E.	1st and 3rd Sundays.

DIRECTORY OF LABOUR ORGANIZATIONNRIO'I OTSN A—*Continued.*

Name of Organization.	Name of President.	President's Address.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
Toronto.—*Con.*					
Brotherhood of Locomotive Firemen and Enginemen, No. 67	Geo. E. Crowhurst	90 Wolseley St.	Jas. Pratt	172 Huron St.	1st Wednesday night, 3rd Sunday after'n.
Brotherhood of Locomotive Firemen and Enginemen	T. F. McCabe	27 Kimberley Av.	H. Schaefer	36 Lyall Ave.	2nd and 4th Tuesdays.
Railway Mail Clerks' Association	W. G. Jessop	50 Afton Av.	R. Cowling	430 Manning Ave.	No regular time.
Brotherhood of Railway Trainmen, No. 255	D. O'Mara	385 Pacific Av.	J. H. Davison	168 St. John's Road	1st and 3rd Sundays, 2 p.m. and Monday, 1.30 p.m.
Brotherhood of Railway Trainmen, No. 322	J. Tait	G. T. R., New Toronto.	H. T. Meredith	282 Crawford St.	1st Sunday, 2.30 p.m., 3rd Sunday, 7.30 p.m.
Press Assistants, No. 1, C. F. of L.	Thos. Morton	13 Dean St.	F. S. Attrell	127 Marlborough Ave.	1st Thursday.
Welland.					
Bricklayers', Masons' and Plasterers' International Union, No. 32	Walter Edington.	Franklin St.	Caradoc Roberts.	Welland	1st and 3rd Mondays.
Amalgamated Society of Carpenters and Joiners, No. 813.	Geo. Urquhart	Garner Av.	Alf. Laing	Box 121	Alternate Mondays from January 10th.
United Brotherhood Carpenters and Joiners, No. 969	Wm. Burgess	Welland	Byron Jackson	Welland	2nd and 4th Fridays.
International Moulders' Union of North America, No. 472	Wm. Brown	Welland P. O.	Edgar Jones	Box 117	1st and 3rd Wednesdays
Windsor.					
Journeymen Barbers' International Union, No. 451	Andrew Kenny	49 Sandwich St. W.	Arthur Wilkins	31 Brant St.	4th Wednesday.
Brotherhood Painters, Decorators and Paperhangers, No. 629	Geo. H. Towle	40½ Sandwich St. W.	R. H. Brampton	40 Marentette Ave.	2nd Thursday.
International Association of Marine Engineers, No. 11	Alex. McDonald	28 Crawford Av.	Neil Maitland	221 London St.	
Journeymen Tailors' Union of America, No. 114	H. Dumas	Box 351	G. H. Elliott	Box 351	1st and 3rd Mondays.
Protective Association of Team Drivers, No. 1	Frank Hormon	Sandwich	M. Delb. Kennedy	Campbell Ave.	1st and 3rd Thursdays.

Order of Railway Conductors, No. 494	John Merritt	14 Pelisher St.	G. Jackson	114 Goyeau St.	2nd and 4th Sundays, 2.30 p.m.
Brotherhood of Locomotive Engineers, No. 390	Wm. Latchman	Sandwich St. E.	G. W. Richardson.	59 Aylmer Ave.	2nd and 4th Tuesdays.
Brotherhood of Railway Trainmen, No. 316	Alf. Staples	69 Albert St.	Chas. Wildrick	168 Dougal Ave.	1st and 3rd Wednesday nights, 2nd and 4th Sunday mornings.
Brotherhood of Locomotive Firemen and Enginemen, No. 421	Ernest Gay	91 Dougal Av.	A. R. Butler	28 Glengarry Ave.	1st Sunday, 2. p.m., 4th Tuesday, 8.30 p.m.
Bricklayers', Masons' and Plasterers' International Union, No. 6	Wm. J. Nesbett	25 McKay Av.	Rupert G. Thompson	72 Cameron Ave.	Every Tuesday.
Typographical Union, No. 553. Woodstock.	W. J. Walker	Stearns Laboratory	Geo. E. Marentette	98 Albert St.	1st Monday.
Bartenders' International League, No. 344	Patrick J. Farrell.	Royal Hotel	M. C. Barrey	Royal Hotel	1st of month.
Bricklayers' and Masons' International Union, No. 22	Stephen May	Woodstock	E. Johnson	Woodstock	2nd and 4th Tuesdays.
International Moulders' Union, No. 249	Jas. Martin	Woodstock	Fred Childs	Box 746	3rd Friday.
International Typographical Union, No. 317	John E. Sharman.	Express Printing Co.	J. M. Manser	312 Dundas St.	1st Thursday.

WAGES AND HOURS OF LABOUR.

Table showing average wages per week and hour, and hours of labour, with comparison between those organized and unorganized in localities as reported also number of days idle and periods of wage payment.

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
ALLANDALE:	$ c.	$ c.	c.	c.								
Bro. of Locomotive Firemen and Enginemen, No. 442....	12 00	12 00	19	19	ir'rg'lar	.....	ir'rg'lar	.....	ir'rg'lar	.....	varies	monthly
ALLISTON:												
Int. Bro. of Maintenance of Way Empl., (C.S.R.) No. 217.	9 30	9 30	15	15	50	50	10	10	60	60	none	monthly
AMHERSTBURG:												
Intern. Rock Drillers Union, No. 504	21 00	all organ	30	.....	50	.....	10	.....	60	.....	90	fortnightly
AURORA:												
American Federation of Musicians, No. 335.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
BELLEVILLE:												
Bricklayers', Masons' and Plasterers' Intern. Union, No. 30.	20 00	13 50	36½–40	25	45	45	9	9	54	54	100	weekly
Bro. Locomotive Firemen and Enginemen, No. 66.	17 50	17 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. Locomotive Engineers, No. 189	25 00	25 00	41½	41½	50	50	10	10	60	60	15	monthly
United Assoc. Plumbers, Gasfitters, etc., No. 411.....	.....	.....	.....	.....	50	.....	9	.....	59	.....	.....	weekly
Bro. of Painters and Decorators of America, No. 86.....	12 00	12 00	20	20	45	45	8	8	53	53	50	weekly
BLENHEIM:												
Intern. Bro. Maintenance of Way Employes, No. 502....	9 00 to 12 69	9 00 to 12 69	15 to 21½	15 to 21½	50	50	10	10	60	60	none	monthly
BRANTFORD:												
United Bro. Carpenters and Joiners of America, No. 498.	14 00	11 00	30	25	50	50	5	5	55	55	60	weekly
Amalg. Soc. Carpenters and Joiners, No. 783.....	14 00	12 00	30	27½	50	50	5	5	55	55	40	weekly
Journ. Tailors' Union of America, No. 117 (Male).....	10 50	10 50	22	22	50	50	10	10	60	60	90	weekly
" " " (Female).....	5 00	5 00	15	15	50	50	10	10	60	60	90	weekly
Operative Plasterers' Intern. Assoc., No. 164	12 00	less	35	less	45	45	9	9	54	54	150	weekly
Journ. Barbers' Intern. Union, No. 298.....	12 00	.....	19	.....	50	50	13	13	63	63	.....	weekly
Cigar Makers' Union, No. 59	10 00	10 00	20	17	40	50	8	10	48	60	44	weekly
Moulders Union, No. 29	16 50	13 00	25	20	50	50	9	9	59	59	25	fortnightly

Bartenders' Intern. League, No. 182	12 00	12 00	21	21	45	45	12	12	57	57	none	wk., f., m.
Bricklayers' and Masons' Intern. Union, No. 9	19 80	16 50	45	30	40	50	4	5	44	55	60	weekly
Journ. Plumbers, Gasfitters, etc., No. 186	15 00	.....	30	.....	45	.....	5	.....	50	.....	24	weekly
Bro. Painters and Paperhangers, No. 313	10 80	.....	21	.....	45	.....	9	.....	54	.....	.....	weekly
United Bro. Carpenters and Joiners	16 50	14 00	30	23⅓	50	55	5	5	55	60	.....	weekly
BERLIN:												
Journ. Tailors' Union of America, No. 264 (Male)	12 00	8 00	20	14	50	50	10	10	60	60	25	fortnightly
" " " (Female)	9 00	6 00	15	10	50	50	10	10	60	60	25	fortnightly
Canadian Assoc. of Stationary Engineers, No. 9	12 00	12 00	22½	22½	50	50	9	9	59	59	none	weekly
Cigar Makers' Intern. Union, No. 422	9 00	9 00	25	16	40	50	4	5	44	55	40	weekly
Federal Labour Union, No. 17	11 00	9 00	19	15	50	50	9	9	59	59	150	fortnightly
Musicians' Protective Association	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
United Bro. of Carpenters and Joiners, No. 553	15 00	12 00	27½	20	45	50	9	10	54	60	50	fortnightly
Boot and Shoe Workers' Union, No. 206 (Male)	12 00	10 00	20	17½	50	50	7½	7½	57½	57½	10	fortnightly
" " " (Female)	6 00	5 00	10	8½	50	50	7½	7½	57½	57½	10	fortnightly
Upholsterers' Intern. Union, No. 42	12 00	12 00	20	20	50	50	8	8	58	58	30	fortnightly
Hod Carriers' Intern. Union, No. 160	15 00	12 00	28	22	45	45	9	9	54	54	75	fortnightly
Intern. Typographical Union, No. 366	10 00	10 00	20	20	45	45	9	9	54	54	.....	wk. or fort.
Brewery Workers' Intern. Union., No. 170	12 00	12 00	20	20	47½	47½	9	9	56½	56½	None	fortnightly
Bricklayers', Masons' and Plasterers' Intern. Union, No. 12.	21 60	all org	40	.....	45	.....	9	.....	54	.....	75	fortnightly
BROCKVILLE:												
Bartenders' Intern. League, No. 308	10 00	10 00	16½	16½	45	45	6	6	51	51	None	weekly
Order of Railway Conductors, No. 366	20 00	20 00	29	29	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Firemen and Enginemen, No. 69	18 00	18 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Engineers, No. 118	25 00	25 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
United Bro. Carpenters and Joiners, No. 799	15 00	11 25	30	25	45	45	9	9	54	54	60	weekly
CARLETON PLACE:												
Intern. Moulders' Union of North America, No. 362	20 00	20 00	40	40	50	50	7	7	57	57	30	fortnightly
Intern. Assoc. of Machinists, No. 211	16 50	16 50	30	30	50	50	5	5	55	55	30	monthly
Intern. Bro. of Blacksmiths, No. 424	14 00	.....	24	.....	50	.....	5	.....	55	.....	25	monthly
Bricklayers' and Masons' Intern. Union, No. 28	21 00	13 50	39	22½	45	50	9	10	54	60	125	fortnightly
COLLINGWOOD:												
Bricklayers' and Masons' Intern. Union, No. 19	20 00	15 00	37½	27½	45	45	9	9	54	54	175	fortnightly
Journ. Barbers' Union, No. 536	11 00	.....	17½	.....	50	.....	13	.....	63	.....	None	weekly
Intern. Union of Steam Engineers, No. 321	12 00	11 00	20	18	50	50	10	10	60	60	None	fortnightly
Intern. Longshoremen's Union, No. 476	12 50	12 50	30	30	50	50	10	10	60	60	100	by job
CORNWALL:												
Journ. Tailors' Union, No. 355	12 00	.....	20	.....	50	.....	10	.....	60	.....	24	weekly
CHAPLEAU:												
Independent Bro. of Maintenance of Way Empl., No. 237	11 00	11 00	18	18	50	50	10	10	60	60	None	monthly
Bro. of Locomotive Firemen and Enginemen, No. 321	25 00	25 00	.....	.....	mile'g	syst'm	.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Engineers, No. 319	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
DUNDAS:												
Intern. Moulders' Union, No. 269	14 50	14 50	29	29	50	50	None	None	50	50	.....	fortnightly

Table showing earnings per week, etc.—*Continued.*

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
ELK LAKE:	$ c.	$ c.	c.	c.								
Western Federation of Miners, No. 140	18 00	18 00	33⅓	33⅓	45	45	9	9	54	54	.....	monthly
ESSEX:												
Intern. Bro. of Maintenance of Way Empl., No. 312	9 60	.....	16	.....	50	.....	10	.....	60	.....	10	monthly
FORT FRANCES:												
United Bro. of Carpenters and Joiners of America	14 00	14 00	35	35	50	50	10	10	60	60	100	.....
FORT WILLIAM:												
Intern. Longshoremen's Assoc. (Grain trimmers) No. 479	20 00	All or.	25	.....	60	.....	15	.....	75	.....	140	weekly
Bro. of Boiler Makers, Iron Ship Builders, etc., No. 505	20 00	.....	40	.....	47½	.....	5	.....	52½	.....	none	monthly
Intern. Bro. Maintenance of Way Employ., No. 128	10 20	9 00	17	15	50	50	10	10	60	60	varies	monthly
Intern. Longshoremen's Assoc., (Coal Handlers) No. 746	17 40	14 40	29	24	50	50	10	10	60	60	.....	monthly
Order of Railway Conductors, No. 286	22 75	22 75	42	42	45	45	9	9	54	54	none	monthly
Intern. Moulders' Union, No. 429	14 25	14 25	21	21	50	50	10	10	60	60	.....	fortnightly
Am. Federation of Labour, No. 12,799	13 00	13 00	24	24	45	45	9	9	54	54	none	monthly.
Amal. Soc. of Carpenters and Joiners	24 00	24 00	40	40	50	50	10	10	60	60	60	fortnightly
GALT:												
Intern. Moulders' Union, No. 447	13 00	13 00	23	23	50	50	5	5	55	55	30	weekly
Typographical Union, No. 411	11 50	11 50	24	24	42½	42½	5½	5½	48	48	none	week. & fort.
Journ. Barbers' Intern. Union, No. 124	11 00	11 00	20	17	45	50	14	14	59	64	none	weekly
Amalg. Soc. of Engineers, No. 666	12 38	12 38	22½	22½	50	50	5	5	55	55	.....	fortnightly
Am. Federation of Musicians, No. 124	.....	All or.	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
GUELPH:												
Intern. Moulders' Union, No. 212	20 50	17 50	34	30	50	50	9	9	59	59	40	weekly
Bricklayers' and Masons' Intern. Union, No. 3	23 00	.....	43	.....	45	.....	9	.....	54	.....	100	week. or fort.
Brussels Carpet Weavers Union, No. 277	.....	.....	.....	.....	50	50	5	.....	55	.....	.....	fortnightly
Typographical Union, No. 391	14 25	All or.	29	.....	42	.....	6	.....	48	.....	none	weekly
Piano and Organ Workers' Intern. Union, No. 34	12 40	12 40	22½	22½	50	50	5	5	55	55	14	fortnightly
HAMILTON:												
Boot and Shoe Workers' Union, No. 228	.....	.....	.....	.....	50	.....	5	.....	55	.....	12	weekly

Boot and Shoe Workers' Union, No. 234	8 50	.....	17	.....	45	.....	4	.....	49	.....	.....	weekly
Intern. Alliance of Stage Employ., No. 129	12 00	7 20	30	17	30	30	12	12	42	42	75	weekly
Sheet Metal Workers' Intern. Alliance., No. 61	14 00	.....	32½	.....	45	45	5	5	50	50	45	weekly
Musicians' Protective Assoc., No. 293	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Order of Railway Conductors, No. 27	18 00	18 00	30	30	50	50	10	10	60	60	15	monthly
Typographical Union, No. 129	16 00	.....	33½	.....	40, 43	.....	5	.....	45, 48	.....	none	weekly
Stove and Steel Range Mounters' Intern. Union, No. 35	10 00	7 50	20	15	50	50	9	9	59	59	75	weekly
Journ. Barbers' Intern. Union, No. 131	12 00	10 00	21	15	45	50	13	15	58	65	none	weekly
Fed. Labour Union, No. 11 (City Foremen)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	fortnightly
Bro. of Railway Trainmen, No. 226	12 00	12 00	20	20	55	55	11	11	66	66	.....	monthly
Journ. Horseshoers' Intern. Union, No. 72	14 50	.....	26¼	.....	50	.....	5	.....	55	.....	.....	weeklyy
Intern. Broom and Whisk Makers' Union, No. 9	13 80	All or.	25	.....	45	.....	4½	.....	49½	.....	20	weekly
Bro. of Railway Carmen	10 00	10 00	20	20	50	50	9	9	59	59	14	monthly
Journ. Stonecutters' Association of North America	20 90	All or.	47½	.....	40	.....	4	.....	44	.....	100	fortnightly
Bro. of Locomotive Engineers, No. 133	20 00	20 00	30	30	50	50	10	10	60	60	.....	monthly
Amalg. Soc. of Carpenters and Joiners, No. 789	15 40	.....	35	.....	40	.....	4	.....	44	.....	.....	.....
Printing Pressmen's Union, No. 176	12 10	All or.	25	.....	43½	.....	4½	.....	48	.....	none	weekly
Painters' and Decorators' Intern. Union, No. 205	12 00	Less	30	Less	45	.....	4	.....	49	.....	.....	weekly
Amalg. Soc. of Engineers	15 00	.....	27	.....	50	.....	5	.....	55	.....	.....	fortnightly
Boot and Shoe Workers' Union, (Cutters) No. 232	13 20	.....	24	.....	50	.....	5	.....	55	.....	14	weekly
Cigar Makers' Union, No. 55	11 00	.....	25	.....	40	.....	4	.....	44	.....	17	weekly
Amalg. Assoc. of Street and E. R. Employ., No. 107	12 00	12 00	18	18	55	55	5	5	60	60	none	monthly
Metal Polishers, Buffers, etc., Union	16 50	12 00	27½	20¼	50	50	9	9	59	59	60	weekly
Journ. Tailors' Union of America, No. 149 (Male)	15 00	.....	25	.....	.....	.....	.....	.....	.....	.....	30	weekly
" " " (Female)	7 00	.....	18	.....	.....	.....	.....	.....	.....	.....	30	weekly
Unit. Bro. of Leather Workers on Horse Goods, No. 158.	12 00	12 00	20	20	50	50	9	9	59	59	7	fortnightly
Tobacco Workers' Intern. Union, No. 48	.....	.....	.....	.....	50	50	5	5	55	55	.....	weekly
INGERSOLL:												
Bro. of Maintenace of Way Employ., No. 503	11 15	11 15	18½	18½	50	50	10	10	60	60	Varies	monthly
JACK FISH:												
Bro. of Maintenance of Way Employ	10 20	10 20	17	17	50	50	10	10	60	60	None	monthly
KINGSTON:												
Hod Carriers' and Building Labourers' Union, No. 66	12 00	9 00	25	15	40	50	8	10	48	60	90	fortnightly
Masters' and Mates' Assoc.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake Mariners' Union	8 75	6 50	.....	.....	.....	.....	.....	.....	.....	.....	120	end of trip
Journ. Tailors' Union of America, No. 263 (Male)	10 00	.....	18½	.....	45	.....	9	.....	54	.....	.....	weekly
" " " (Female)	4 00	.....	7½	.....	45	.....	9	.....	54	.....	.....	weekly
United Bro. of Carpenters and Joiners, No. 249	15 00	13 50	31¼	25	40	45	8	9	48	54	45	fortnightly
Bricklayers', Masons' and Plasterers' Int. Union, No. 10	21 60	14 00	45	29	40	40	8	8	48	48	100	fortnightly
National Assoc. of Marine Engineers	18 00	18 00	30	30	47	47	9	9	56	56	60	wk. or mo.
Journ. Barbers' Union of America, No. 514	12 00	.....	18	.....	50	.....	17	.....	67	.....	None	weekly
Bro. Painters, Decorators and Paperhangers of America, No. 114	13 50	13 50	25	21	45	55	9	10	54	65	60	weekly

Table showing average wages per week, etc. —*Continued.*

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
LONDON:	$ c.	$ c.	c.	c								
United Assoc. of Plumbers and Steamfitters, No. 289	15 40	11 00	35	25	40	40	4	4	44	44	50	weekly
Journ. Stonecutters' Assoc. of America	19 80	18 70	45	42½	40	40	4	4	44	44	75	weekly
Fed. Assoc. Letter Carriers, No. 4	16 50	16 50	.....	.....	.....	.....	.....	.....	.....	.....	None	fortnightly
Bro. of Locomotive Firemen and Enginemen, No. 468	15 00	15 00	25	25	50	50	10	10	60	60	.....	monthly
Cigar Makers' Union, No. 278	11 00	less	25	.....	40	.....	4	.....	44	.....	.....	weekly
Bro. of Railway Trainmen, No. 415	23 00	23 00	.....	.....	.....	.....	.....	.....	.....	.....	Varies	monthly
Am. Federation Musicians	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amalg. Soc. Carpenters and Joiners, No. 792	13 86	13 86	28	28	45	45	4½	4½	49½	49½	50	weekly
Canadian Assoc. of Stationary Engineers, No. 30	12 00	12 00	20	20	50	50	10	10	60	60	None	wk., f. or m.
Amalg. Soc. of Engineers, No. 669	12 35	11 00	22½	20	50	50	5	5	55	55	.....	wk. or mon.
Bro. of Railway trainmen, No. 75	15 00	15 00	20	20	63	63	13	13	76	76	.....	monthly
Intern. Assoc. Bricklayers and Masons, No. 5	19 80	18 00	45	35	40	47½	4	4½	44	52	175	weekly
Order of R. Telegraphers, G. T. R., No. 1	12 50	12 50	17½	17½	60	60	12	12	72	72	none	monthly
Metal Polishers, Buffers, etc., No. 32	18 00	12 00	33	22	50	50	6	6	56	56	30	wk. or fort.
Bartenders Intern. League, No. 137	12 00	8 00	30	20	40	40	none	none	40	40	none	.....
Intern. Bro. of Maintenance of Way Empl., No. 195	12 00	12 00	20	20	50	50	10	10	60	60	none	monthly
Journ. Tailors' Intern. Union, No. 30 (Male)	14 00	.....	25	.....	47½	.....	9½	.....	57	.....	60	weekly
" " " (Female)	8 00	.....	14	.....	47½	.....	9½	.....	57	.....	60	weekly
Printing Pressmen and Assist Union, No. 173 (Pressmen)	14 00	.....	27	.....	47½	.....	4½	.....	52	.....	.....	weekly
" " " (Assistants)	7 00	.....	13½	.....	47½	.....	4½	.....	52	.....	.....	weekly
Typographical Union, No. 133	16 00	12 00	33⅓	20	40	45	8	9	48	54	.....	weekly
Boiler Makers' and Iron Ship Builders' Un., No. 203	19 00	14 00	33	24	50	50	7½	7½	57½	57½	none	wk. or mon.
United Garment Works Union, No. 33 (Male)	15 00	11 27	30½	23	42½	45	4	4	46½	49	none	weekly
" " " (Female)	8 00	6 00	17	12	42½	45	4	4	46½	49	none	weekly
United Bro. of Carpenters and Joiners, No.	13 36	13 36	27	27	45	45	4½	4½	49½	49½	30	weekly
Journ. Barbers' Intern. Union, No. 336	12 00	10 00	19	16	50	50	13	13	63	63	none	weekly
Int. Alli. Theatrical Stage Empl., No. 105	12 50	12 50	25	25	35	35	9	9	44	44	75	.....
LINDSAY:												
Bro. of Locomotive Engineers, No. 174	25 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly

Bro. of Locomotive Firemen and Enginemen	14 00	14 00	20	20	50	50	12	12	62	62	50	monthly
MIDLAND:												
Intern. Longshoremen's Assoc., No. 199	.....	.....	30	30	.....	.....	.....	.....	.....	.....	150	.....
NIAGARA FALLS:												
Amalg. Soc. of Carpenters and Joiners, No. 797	16 00	.....	30	.....	45	.....	9	.....	54	.....	.....	weekly
Journ. Stonecutters Assoc. of North America	24 00	.....	50	.....	40	.....	8	.....	48	.....	75	fortnightly
NORTH BAY:												
Intern. Bro. Maintenance of Way Empl., No. 244	11 40	10 00	19	17	50	50	10	10	60	60	none	monthly
Bro. of Railway Trainmen, No. 249	20 00	20 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Order of Railway Conductors, No. 242	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Order. of R. Telegraphers, (Cobalt Div.) No. 99	21 00	21 00	30	30	60	60	12	12	72	72	16	monthly
Bro. of Railway Carmen, No. 192	12 00	12 00	19	19	50	50	7	7	57	57	6	monthly
OSHAWA:												
Int. Moulders' Union, No. 136	15 00	15 00	25	25	50	50	9	9	59	59	none	wk. or fort.
ORANGEVILLE:												
Intern. Bro. Maintenance of Way Empl., No. 214	10 50	10 50	17½	17½	50	50	10	10	60	60	none	monthly
OTTAWA:												
Bro. of Locomotive Firemen and Enginemen, No. 81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bricklayers' International Union., No. 17	25 00	.....	50	.....	45	.....	5	.....	50	.....	195	.....
Bro. of Railway Carmen of Am., No. 230	10 80	10 80	18	18	50	50	10	10	60	60	none	monthly
Bricklayers' and Masons' Int. Un., (Stone Masons') No. 14	25 00	17 80	50	33	45	45	5	9	50	54	125	fortnightly
Oper. Plasters' Intern. Association	20 00	16 25	40	32½	45	45	5	5	50	50	100	fortnightly
Amalg. Assoc. of Street and E. R. Empl., No. 279	12 30	12 30	20½	20½	50	50	10	10	60	60	14	fortnightly
United Bro. of Carpenters and Joiners of America	15 00	.....	30	.....	45	.....	5	.....	50	.....	30	wk. or fort.
Painters, Decorators and Paperhangers of Am., No. 200	13 50	13 50	27	22½	45	50	5	10	50	60	25	wk. or fort.
Intern. Assoc. of Machinists, No. 412	16 50	11 00	28	18½	50	50	9	9	59	59	25	fortnightly
Intern. Moulders' Union of North America, No. 280	16 00	10 00	26½	14½	50	50	7	7	57	57	.....	fortnightly
Order of Railway Conductors, No. 29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Railway Trainmen, No. 185	mileag	e basis	.....	.....	50	50	10	10	60	60	25	monthly
Stereotypers and Electrotypers Union, No.50	16 00	.....	33⅓	.....	43	.....	5	.....	48	.....	none	fortnightly
Bro. of Railway Trainmen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stone Cutters Intern. Assoc of North America	19 00	15 00	44	34	40	40	4	4	44	44	125	fortnightly
Int. Steel and Copper Plate Printers' Union, No. 6	.....	.....	.....	.....	42½	42½	4½	4½	47	47	.....	weekly
Sheet Metal Workers' Intern. Alli., No. 47	16 00	16 00	28½	28½	45	45	5	5	50	50	none	weekly
Typographical Intern. Union, No. 102	16 00	16 00	33⅓	33⅓	43	43	5	5	48	48	none	wk. or fort.
Int. Alli. of Theatrical Stage Empl., No. 95	15 00	all org	.....	.....	.....	.....	.....	.....	.....	.....	60	.....
Printing Pressmen's Union, No. 5	17 50	.....	36	.....	42½	.....	5	.....	47½	.....	none	weekly
Hod Carriers' and Building Labourers' Union, No. 32	12 50	10 00	25	20	45	45	5	5	50	50	.....	fortnightly
Press Feeders' and Assistants' Union, No. 9	9 00	9 00	19	.....	43	.....	5	.....	48	.....	.....	wk. or fort.
Intern. Bro. of Teamsters, (Cab Drivers) No. 192	10 00	10 00	14	14	60	60	12	12	72	72	.....	weekly
Butchers' and Meat Cutters' Union, No. 464	12 00	less	17½	less	55	55	14	14	69	69	50	weekly
Intern. Bro. of Carpenters and Joiners, No. 93	15 00	.....	30	.....	45	.....	5	.....	50	.....	30	fortnightly
United Bro. of Leather Workers' on Horse Goods, No. 162	11 00	11 00	17½	17½	50	50	9	9	59	59	.....	weekly
Plumbers' and Steam Fitters' Union Assoc., No. 71	20 00	20 00	40	40	45	45	5	5	50	50	10	weekly

Table showing average wages per week, etc.—*Continued.*

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
OTTAWA—*Continued.*	$ c.	$ c.	c.	c.								
Int. Hod Carriers' and Plasters' Labourers' Union, No. 235	12 50	10 50	25	21	45	45	5	5	50	50	12	fortnightly
Amalg. Soc. of Carpenters and Joiners, No. 826	15 00	10 00	30	20	45	45	5	5	50	50	14	fortnightly
Int. Hod Carriers' and Builders' Labourers' Union, No. 32	13 75	10 00	25	17½	50	50	5	5	55	55	75	weekly
Gas Stokers	11 00	11 00	13	13	60	60	12	12	84	84	none	fortnightly
Amalg. Soc. Carpenters and Joiners, No. 824	15 00	12 50	30	25	45	45	5	5	50	50	.....	fortnightly
OWEN SOUND:												
Bricklayers' and Masons' Intern. Union, No. 11	21 60	16 30	40	30	45	45	9	9	54	54	90	fortnightly
Journ. Stone Cutters' Assoc. of North America	19 20	15 00	40	25	40	50	8	10	48	60	.....	fortnightly
PALMERSTON:												
Order of Railway Conductors, No. 492	15 00	15 00	29	29	40	40	8	8	48	48	105	monthly
Bro. of Locomotive Firemen and Enginemen, No. 181	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
PETERBOROUGH:												
Journ. Barbers' Intern. Union of America, No. 402	12 00	12 00	19	19	15	15	13	13	63	63	.....	weekly
Typographical Union, No. 248	12 00	all org	19	.....	40	.....	8	.....	48	.....	.....	weekly
Journ. Stonecutters' Union of North America	21 60	.....	45	.....	40	.....	8	.....	48	.....	.....	fortnightly
Bricklayers' and Masons' Intern. Union, No. 17	19 20	19 20	40	35½	40	45	8	9	48	54	.....	fortnightly
Bro. of Painters, Decorators and Paperhangers, No. 379	13 50	8 60	25	16	45	45	9	9	54	54	.....	weekly
PORT ARTHUR:												
Int. Moulders' Union, No. 429	15 00	15 00	25	25	50	50	9	9	59	59	.....	fortnightly
Wood, Wire, Metal Lathers' Intern. Union, No. 223	25 00	25 00	55	55	40	40	8	8	48	48	.....	fortnightly
Unit. Assoc. Plumbers and Steamfitters, No. 278	.....	.....	.....	.....	45	45	9	9	54	54	.....	fortnightly
Int. Assoc of Machinists, No. 820	21 00	18 00	42½	30	45	50	5	10	50	60	none	weekly
United Bro. Carpenters and Joiners of Am., No. 285	21 00	19 00	35	32	50	50	10	10	60	60	150	fortnightly
Bartenders' Intern. League, No. 757	15 00	9 00	15	10	85	85	13	13	98	98	none	monthly
Amalg. Soc. Carpenters and Joiners	21 00	21 00	35	35	50	50	10	10	60	60	30	fortnightly
Order of Railway Conductors, No. 536	20 00	20 00	39	39	.....	.....	.....	.....	.....	.....	none	monthly
Typographical Intern. Union, No. 575	18 00	all org	38	38	40	40	8	8	48	48	.....	weekly
Journ. Stonecutters of North America	24 40	24 40	55	55	40	40	4	4	44	44	100	weekly

PORT COLBORNE:												
United Bro. Carpenters and Joiners, No. 1,168	13 50	13 50	30	22½	45	50	9	10	54	60	50	weekly
PORT HOPE:												
Intern. Moulders' Union, No. 189	30 00	30 00	50	50	50	50	10	10	60	60	35	fortnightly
RIDGEMOUNT:												
Order of Railway Telegraphers, No. 16	17 50	17 50	17½	17½	60	60	12	12	84	84	15	monthly
ST. CATHARINES:												
Amalg. Soc. Carpenters and Joiners, No. 61	16 50	16 50	33	33	45	45	5	5	50	50	none	weekly
United Bro. Carpenters and Joiners of Am., No. 38	16 50	12 50	33	25	45	45	5	5	50	50	30	w. & fort.
Typographical Intern. Union, No. 416	15 00	.....	33	.....	40	40	8	8	48	48	none	weekly
Bricklayers', Masons' and Plasterers' Union, No. 4	22 50	.....	45	.....	45	.....	5	.....	50	50	125	weekly
Plumbers' and Steamfitters' Intern. Union, No. 244	15 00	10 00	30	20	45	45	5	5	50	50	75	weekly
Painters', Decorators' and Paperhangers' Union, No. 407	15 00	15 00	30	30	45	45	5	5	50	50	.....	weekly
Barbers' Union, No. 1	12 00	.....	16½	.....	60	.....	13	.....	73	.....	.....	weekly
Journ. Tailors' Union of America, No. 235 (Male)	15 00	15 00	25	25	50	50	10	10	60	60	50	weekly
" " " (Female)	9 00	9 00	15	15	50	50	10	10	60	60	50	weekly
Intern. Cigar Makers' Union, No. 140	12 00	8 00	25	16	40	42	8	8	48	50	20	weekly
ST. MARY'S:												
Journ. Stonecutters' Assoc.	21 60	All or.	45	.....	40	.....	8	.....	48	.....	varies	weekly
ST. THOMAS:												
Journ. Tailors Union of America, No. 141 (Male)	12 00	9 00	18	13½	55	55	11	11	66	66	60	weekly
" " " (Female)	6 50	4 50	10	7	55	55	11	11	66	66	60	weekly
Order of Railway Conductors, No. 13	20 00	20 00	.....	.....	.....	.....	.....	.....	.....	.....	none	monthly
Intern. Assoc. of Machinists	15 60	15 60	29	26	45	50	9	10	54	60	40	monthly
Bricklayers' and Masons' Union, No. 8	21 60	17 80	40	33	45	45	9	9	54	54	50	fortnightly
Bro. of Railway Trainmen, No. 47	22 00	22 00	.....	.....	.....	.....	.....	.....	.....	.....	varies	monthly
Amalg. Assoc. of Street and E. R. Empl., No. 488	11 50	11 50	18	18	50	50	10	10	60	60	few	weekly
SARNIA:												
Order of Railway Conductors, No. 189	22 00	22 00	milea	ge bas	is		.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Engineers, No. 240	25 00	25 00	31	31	60	60	12	12	72	72	.....	monthly
Bro. of Locomotive Firemen and Enginemen, No. 221	17 00	17 00	.....	.....	.....	.....	.....	.....	.....	.....	25	monthly
Journ. Barbers' Intern. Union, No. 467	12 00	9 00	19¼	11¼	48	63	14	17	62	80	none	weekly
SAULT STE. MARIE:												
Bro. of Railway Trainmen, No. 611 (Conductors)	21 60	21 60	30	30	60	60	12	12	72	72	.....	monthly
" " " (Brakesmen)	14 40	14 40	20	20	60	60	12	12	72	72	.....	monthly
Bro. of Locomotive Firemen and Enginemen, No. 606	14 40	14 40	20	20	60	60	12	12	72	72	.....	monthly
Intern. Moulders' Union of North America, No. 391	18 00	18 00	30	30	50	50	10	10	60	60	none	monthly
Intern. Bro. Maintenance of Way, Empl	11 40	11 40	19	19	50	50	10	10	60	60	none	monthly
Bro. of Locomotive Engineers, No. 36	25 00	25 00	30	30	65	65	13	13	78	78	none	monthly
SCHREIBER:												
Intern. Bro. Maintenance of Way Empl., No. 260	12 00	10 20	20	17	50	50	10	10	60	60	none	monthly
SMITH'S FALLS:												
Bricklayers' and Masons' Union, No. 21	21 00	all org	39	.....	45	.....	9	.....	54	.....	150	fortnightly
Bro. of Railway Trainmen, No. 527	16 00	16 00	24	24	40	40	8	8	48	48	60	monthly

Table showing average wages per week, etc.—*Continued.*

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
STEVENSVILLE:	$ c.	$ c.	c.	c.								
Int. Bro. Maintenance of Way Empl., No. 328	9 90	9 90	16½	16½	50	50	10	10	60	60	.....	monthly
STRATFORD:												
Order of Railway Conductors, No. 15	18 00	18 00	.....	.....	.....	.....	.....	.....	.....	.....	varies	monthly
Bro. of Locomotive Firemen and Enginemen, No. 38	17 00	17 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Cigar Makers' Union, No. 424	10 00	all org	21	21	40	.....	7½	.....	47½	.....	12	weekly
Bro. of Locomotive Engineers, No. 188	20 00	20 00	milea	ge bas	is	.....	.....	.....	.....	.....	.....	monthly
STURGEON FALLS:												
Int. Bro. of Paper Makers, etc	15 00	15 00	20	20	60	60	12	12	72	72	.....	fortnightly
THOROLD:												
United Bro. of Carpenters and Joiners, No. 1.677	19 00	10 80	35	20	45	45	9	9	54	54	75	wk. or fort.
TORONTO:												
Bakers' and Confectioners' Int. Union, No. 204	12 00	12 00	21	21	45	45	12	12	57	57	.....	weekly
Journ. Barbers' Intern. Union, No. 517	10 00	7 00	13¼	8½	60	65	16	16	76	81	none	weekly
Bartenders' Union and Ben. Soc., No. 280	16 00	16 00	23¼	23¼	60	60	9	9	69	69	none	weekly
Bill Posters' and Billers' Intern. Alliance, No. 40	9 00	9 00	12	12	60	60	16	16	76	76	90	weekly
Boiler Makers and Iron Ship Builders of America, No. 128	16 50	8 50	31	16	50	50	5	5	55	55	50	fort. or mon.
Intern. Bro. of Bookbinders, No. 28	16 50	all org	34	.....	43¾	.....	4¼	.....	48	.....	.....	weekly
Int. Un. Boot and Shoe Workers, No. 233 (Male)	12 00	12 00	25	25	45	45	4	4	49	49	24	weekly
" " " (Female)	9 00	9 00	18	18	45	45	4	4	49	49	24	weekly
Brass Moulders' Intern. Union of North America, No. 207.	16 50	16 50	30	30	50	50	5	5	55	55	none	wk. or fort.
United Brewery Workers Union, No. 304	12 50	all org	24	.....	49	49	5	5	54	54	.....	weekly
United Brewery Workers' Union, No. 317 (Maltsters)	12 50	all org	21	.....	50	.....	10	.....	60	.....	.....	weekly
Bricklayers', Masons' and Plasterers' Int. Union, No. 2	22 00	17 00	50	38	40	40	4	4	44	44	60	fortnightly
Bridge and Structural Iron Workers, No. 4	17 50	10 00	35	20	45	45	5	5	50	50	.....	fortnightly
Brussels Carpet Weavers T. U. of Am., No. 695	.....	all org	.....	.....	52¼	52¼	5¾	5¾	58	58	.....	fortnightly
Builders' Labourers' Union, No. 1	11 00	.....	25	.....	40	.....	4	.....	44	.....	50	fortnightly
Amalg. Soc. Carpenters and Joiners, No. 802, 1st Branch	15 00	10 00	35	22½	40	40	4	4	44	44	25	wk. or fort.
Amalg. Soc. Carpenters and Joiners, No. 803, 2nd Branch.	14 50	11 00	33	25	40	40	4	4	44	44	15	wk. or fort.
Amalg. Soc. Carpenters and Joiners, No. 805, 4th Branch	14 80	12 25	33	25	40	45	4	4	44	49	varies	fortnightly

Amalg. Soc. Carpenters and Joiners, No. 807, 6th Branch.	14 50	10 00	33	22½	40	40	4	4	44	44	.....	fortnightly
Bro. of Carpenters and Joiners of Am., No. 27	14 50	14 50	33	30	40	45	4	4	44	49	48	fortnightly
Bro. of Carpenters and Joiners of America, No. 1,799	15 40	15 40	35	31	40	45	4	5	44	50	15	fortnightly
Carriage and Waggon Makers' Union, No. 85	10 00	10 00	20	18	45	50	4	5	49	55	67	weekly
Cigar Makers', Intern. Union, No. 27	11 00	.....	25	.....	40	.....	4	.....	44	.....	21	weekly
Civic Employ. Benev. Association	13 00	.....	24	.....	50	.....	5	.....	55	.....	none	weekly
Civic Park Employ., No. 1	12 00	12 00	20	20	45	45	5	5	50	50	50	weekly
Clothing Cutters' and Trimmers' Prot. Assoc., No. 185	14 00	14 00	28½	27	45	48	4	4	49	52	30	weekly
Intern. Bro. of Electrical Workers, No. 114 (Wiremen)	15 40	14 30	35	27	40	49	4	4	44	53	60	wk. or fort.
Intern. Bro. of Electrical Workers, No. 353 (Linemen)	15 00	15 00	26	26	50	50	7	7	57	57	.....	fortnightly
Amalg. Soc. of Engineers, No. 675	14 00	.....	25½	.....	50	.....	5	.....	55	.....	.....	wk. or mon.
Amal. Soc. of Engineers, No. 676	14 00	14 00	25½	25½	50	50	5	5	55	55	.....	wk. or mon.
Steam Engineers' Union (Hoisting and Portable) No. 356	20 00	20 00	40	37	45	52½	5	5½	50	58	100	fortnightly
United Garment Workers of Am., No. 202 (Female)	8 00	8 00	17	15	44	48	4	4	48	52	30	weekly
Glass Bottle Blowers' Intern. Assoc., No. 66	20 00	.....	40	.....	42½	.....	8	.....	50½	.....	90	fortnightly
Granite Cutters' Intern. Assoc. of America	16 50	13 20	37½	30	40	40	4	4	44	44	60	fortnightly
Journ. Horseshoers Intern. Union, No. 49	15 00	15 00	30	24	45	55	5	7	50	62	18	wk. or fort.
Wood, Wire and Metal Lathers' Intern. Union. No. 97	12 00	9 00	27¼	20½	40	40	4	4	44	44	100	fortnightly
United Bro. of Leather Workers on Horse Goods, No. 93	10 00	.....	16½	.....	55	.....	5	.....	60	.....	.....	fortnightly
Lithographers' Intern. Assoc., No. 12	18 00	18 00	34½	34½	47½	47½	4½	4½	52	52	.....	weekly
Intern. Longshoremen's Assoc., No. 646	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	180	weekly
Intern. Assoc. of Machinists, No. 235	14 00	13 75	27½	25	45	50	5	5	50	55	25	w. or fort.
Marble Workers' Union, No. 12	17 00	17 00	39	31	40	50	4	5	44	55	50	fortnightly
Motion Picture Machine Operators' Union	15 00	15 00	35	35	40	40	8	8	48	48	none	weekly
Intern. Moulders' Union, No. 28	16 00	13 00	32	26	45	45	5	5	50	50	30	wk. or fort.
Musical Protective Assoc., No. 149	16 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	weekly
Bro. of Painters, Decorators and Paperhangers, No. 219	13 20	10 00	30	20	40	40	4	4	44	49	65	weekly
Bro of Painters, Decorators and Paperhangers, No. 736	13 20	10 00	30	22½	40	40	4	4	44	44	105	fortnightly
Photo Engravers' Intern. Union, No. 35	20 00	20 00	43	43	42½	42½	4	4	46½	46½	.....	weekly
Piano, Organ and Musical Instr. Workers' Union, No. 39	13 00	13 00	26	26	45	45	5	5	50	50	.....	fortnightly
Operative Plasterers' Intern. Union, No. 48	22 00	20 90	50	47½	40	40	4	4	44	44	98	fortnightly
Plasterers' Labourers' Assoc., No. 1	13 40	13 40	30½	30½	40	40	4	4	44	44	80	fortnightly
Unit. Assoc. Plumbers, Gas Fitters, etc., No. 46	18 70	18 70	42½	42½	40	40	4	4	44	44	60	wk. or fort.
Web Pressmen's Union, No. 1	18 00	.....	37½	.....	40	.....	8	.....	48	.....	none	weekly
Mailers' Union, No. 5	16 00	.....	33⅓	.....	40	.....	8	.....	48	.....	none	weekly
Typographical Union, No. 91 (Male)	17 00	12 75	35	26¼	43¾	43¾	4¼	4¼	48	48	21	weekly
" " (Female)	16 00	12 00	33	24¾	43¾	43¾	4¼	4¼	48	48	21	weekly
Sheet Metal Workers' Intern. Union, No. 30	16 25	12 50	32½	25	45	45	5	5	50	50	.....	weekly
Slate and Tile Roofers' Intern. Union, No. 39	17 50	.....	35	.....	45	.....	5	.....	50	.....	.....	various
Intern Union Steam Engineers, No. 152	13 00	13 00	22	14½	40	60	8	12	48	72	none	weekly
Intern Steam, Water, Gas and Power Pipe Fitters, No. 78	17 50	12 50	40	30	40	40	4	4	44	44	35	fortnightly
Stereotypers' and Electrotypers' Union, No. 21	18 00	all org	27½	.....	40	.....	8	.....	48	.....	.....	weekly
Journ. Stonecutters' Assoc. of North America	22 00	18 70	50	42½	40	40	4	4	44	44	130	fortnightly

Table showing average wages per week, etc.—*Continued.*

Location and Title of Organization.	Average wages per week.		Average wages per hour.		Hours of labour first 5 days.		Hours on Saturday.		Total hours per week.		Average days idle.	Period of wage payments.
	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.	Organized.	Unorganized.		
TORONTO.—*Continued.*	$ c.	$ c.	c.	c.								
Street Railway Employ. Union	12 00	12 00	22	22	45	45	9	9	54	54	25	monthly
Journ. Tailors' Union of America, No. 132 (Male)	15 00	15 00	piece	work	.....	.....	.....	.....	.....	.....	40	weekly
" " " (Female)	11 00	11 00	piece	work	.....	.....	.....	.....	.....	.....	40	weekly
Journ. Tailors' Union of America, No. 156 (Male)	14 00	14 00	24	24	50	50	9	9	59	59	20	fortnightly
" " " (Female)	9 00	9 00	15½	15½	50	50	9	9	59	59	20	fortnightly
Team Owners' Association, No. 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Intern. Bro. of Teamsters, No. 457 (Coal Drivers)	12 00	10 50	21	17½	50	50	10	10	60	60	none	weekly
Commercial Teleg. Un. of Am., No. 1., C.P.R., (Male)	18 00	18 00	40	40	45	45	9	9	54	54	none	monthly
" " " (Female)	15 00	15 00	30	30	45	45	9	9	54	54	none	monthly
Intern. Stage Hands, No. 58	8 00	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	weekly
Ceramic, Mosaic and Encaustic Tile Layers, No. 37	17 50	17 50	40	40	40	40	4	4	44	44	10	fortnightly
Tobacco Workers' Intern. Union, No. 63 (Male)	11 00	all org	22	.....	45	.....	5	.....	50	.....	30	weekly
" " " (Female)	9 00	all org	18	.....	45	.....	5	.....	50	.....	30	weekly
Upholsterers' Intern. Union, No. 30	15 00	12 50	30	25	45	45	5	5	50	50	20	weekly
Order of Railway Conductors, No. 17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	none	monthly
Order of Railway Conductors, No. 345	25 00	25 00	.....	.....	un'ed	.....	.....	.....	.....	.....	none	monthly
Bro. of Locomotive Engineers, No. 70	mileage	basis	35	35	not fix'd	.....	.....	.....	.....	.....	none	monthly
Bro. of Locomotive Engineers, No. 520	20 00	20 00	35	35	60	60	12	12	72	72	.....	monthly
Bro. of Locomotive Firemen and Enginemen, No. 67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Firemen and Enginemen	16 50	16 50	.....	.....	not fix'd	.....	.....	.....	.....	.....	.....	monthly
Railway Mail Clerks' Association	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bro. of Railway Trainmen, No. 255	16 50	16 50	25½	25½	vary	.....	.....	.....	.....	.....	vary	monthly
Bro. of Railway Trainmen, No. 322	15 00	15 00	25	25	vary	.....	.....	.....	.....	.....	vary	monthly
Press Assistants, No. 1, C. T. of L	11 25	11 25	23½	23½	43¾	43¾	4¼	4¼	48	48	30	weekly
WELLAND:												
Bricklayers', Masons' & Plasterers' Intern. Union, No. 32	24 00	19 00	45	35	45	45	9	9	54	54	60	weekly
Amal. Soc. of Carpenters and Joiners, No. 813	12 00	10 25	22½	19	45	45	9	9	54	54	75	weekly
United Bro. of Carpenters and Joiners of Am., No. 969	16 20	13 50	30	25	45	45	9	9	54	54	.....	weekly
Intern. Moulders' Union of N. A., No. 472	17 00	all org	30	.....	50	50	6	6	56	56	.....	fortnightly

WINDSOR:												
Journ. Barbers' Intern. Union, No. 451	12 00	12 00	15	15	65	65	16	16	81	81	none	weekly
Bro. of Painters, Decorators and Paperhangers, No. 629	13 50	13 50	28⅛	25	40	45	8	9	48	54	58	weekly
Nat. Assoc. of Marine Engineers, No. 11	20 00	20 00	28	28	60	60	12	12	72	72	.....	monthly
Journ. Tailors' Union of America, No. 114 (Male)	14 00	14 00	25	25	vary	.....	.....	.....	.....	.....	25	weekly
" " " (Female)	10 00	10 00	15	15	vary	.....	.....	.....	.....	.....	25	weekly
Protective Assoc .of Team Drivers, No. 1	24 00	.....	45	.....	45	.....	9	.....	54	.....	.....	weekly
Order of Railway Conductors, No. 494	20 00	20 00	30	30	50	50	10	10	60	60	vary	monthly
Bro. of Locomotive Engineers, No. 390	20 00	20 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Railway Trainmen, No. 316	18 00	18 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	monthly
Bro. of Locomotive Firemen and Enginemen, No. 421	15 00	15 00	21	21	60	60	12	12	72	72	.....	monthly
Bricklayers', Masons' and Plasterers' Inter. Union, No. 6	29 70	.....	55	.....	45	.....	5	.....	50	.....	90	weekly
Typographical Union, No. 553	12 00	11 00	25	23	43¾	43¾	4¼	4¼	48	48	none	weekly
WOODSTOCK:												
Bartenders' Intern. League, No. 344	10 00	10 00	17	17	60	60	9	9	69	69	none	fortnightly
Bricklayers' and Masons' Intern. Union, No. 22	21 60	all org	40	.....	45	.....	9	.....	54	.....	150	fortnightly
Intern. Moulders' Union, No. 249	16 0	12 00	27½	20	50	50	9	9	59	59	60	weekly
Intern. Typographical Union, No. 317	13 00	13 00	27	27	40	40	8	8	48	48	few	weekly

DIRECTORY OF CENTRAL LABOUR ORGANIZATIONS IN ONTARIO.

Name of Organization.	Date Organized.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
BERLIN:				
Twin City Trades and Labour Council	1900	Otto H. Zimmer ..	Box 665, Berlin ..	2nd & 4th Monds.
BRANTFORD:				
Trades and Labour Council	1886	J. C. Coles.....	Brantford.....	1st & 2nd Weds.
BROCKVILLE:				
Trades and Labour Council	1900	J. H. Gilroy	Brockville	Every Friday.
FORT WILLIAM:				
Trades and Labour Council	1907	F. Stephens	P. O. Box 224.....	2nd & 4th Weds.
GALT:				
Galt and Preston Trades and Labour Council		Wm. Pool	Dumfries St.	
GUELPH:				
Trades and Labour Council	1898	W. B. Parker	56 Paisley Street..	2nd & 4th Frids.
HAMILTON:				
Trades and Labour Council	1888	W. R. Rollo	P. O. Box 323.....	1st & 3rd Frids.
Building Trades Council...		W. Brown	Arthur Ave.	2nd & 4th Tues.
Garment Workers' District Council	1898	C. Bambrick	421 John St. North	2nd Wednesday.
KINGSTON:				
Trades and Labour Council		Geo. Lewis	Kingston	
LONDON:				
Trades and Labour Council	1902	Chas. M. Pearce ..	431 Central Ave...	1st & 3rd Weds.
NIAGARA FALLS:				
Trades and Labour Council		Wm. M. Church ..	Niagara Falls	
OTTAWA:				
Allied Trades and Labour Association	1897	Harry Langley	144 Botelier St. ..	1st & 3rd Thur.
National Trades and Labour Council	1907	Sam Kennedy	178 Avon Lane, New Edinboro...	1st & 3rd Thurs.
Building Trades Council..		Jos. Cinqmars	13 Poplar St.	
Allied Printing Trades Council		W. C. Blount	375 Lyon Street...	
PETERBOROUGH:				
Trades and Labour Council		F. Dobbin	Peterborough.....	
PORT ARTHUR:				
Trades and Labour Council		A. E. Johnstone ...	157 Peter St.	
ST. CATHARINES:				
Trades and Labour Council		Leo T. Coyle	3 Court Street	1st & 3rd Weds.
ST. THOMAS:				
Trades and Labour Council		L. M. Robinson .	St. Thomas	
SARNIA:				
Trades and Labour Council	1902	Thos. C. Sloane ..	Sarnia	2nd & 4th Weds.
STRATFORD:				
Trades and Labour Council	1900	Fred. J. Todd	Box 329, Stratford.	2nd & 4th Frids.
TORONTO:				
Toronto District Labour Council	1881	H. R. Barton	Labour Temple ..	1st & 3rd Thurs.
Allied Printing Trades Council		W. H. Walker ...	602 Givens St. ...	2nd Tuesday.
Building Trades Council ..	1905	Wm. Nettleship ..	19 Gibson Ave.....	2nd & 4th Monds.
United Brotherhood Carpenters and Joiners District Council		Sydney Jones	Labour Temple ..	2nd & 4th Thurs.
Managing Committee Amalgamated Society Carpenters and Joiners		A. J. Udall	26 Howie Ave.....	Alternate Weds.
Painters' District Council..		James Hodsell	162 Jones Ave.....	1st & 3rd Monds.
Garment Workers' Council.		W. F. Bush	102 Ossington Ave.	1st & 3rd Monds.

DIRECTORY OF CENTRAL LABOUR ORGANIZATIONS IN ONTARIO —*Continued.*

Name of Organization.	Date Organized.	Name of Secretary.	Secretary's Address.	Nights of Meeting.
TORONTO.—*Con.*				
Metal Trades Council		Jas. Higgins	573 Perth Ave.....	1st & 3rd Frids.
International Association Machinists' Council		H. Bryson	275 Arthur St.....	
Iron Moulders' Board of Conference		J. H. Barnett	19 Roylat St.....	
Joint Council International Brotherhood of Teamsters	1906	H. R. Barton	305 Sumach St....	2nd Monday.
WALLACEBURG:				
Trades and Labour Council		Jas. Lucas	Box 219, Wallaceburg	
WINDSOR:				
Trades and Labour Council		L. J. Wilber	39 Wellington Ave.	1st & 3rd Weds.
WOODSTOCK:				
Trades and Labour Council		G. Childs	Woodstock	

ONTARIO INDUSTRIAL STATISTICS.

The manufacturers of Ontario have continued the increase in the number of schedules filled in and returned to this bureau by them, there being 679 as compared with 652 last year and 592, 427, and 205 the three preceding years. There is yearly more confidence felt in our invariable role of secrecy, the names of firms not being published but identification being only by an office number, but this process is slow, and the number of factories reporting is certainly not a fair proportion of the whole. By a classification into 32 groups as good a representation of the various industries of the Province is given as is possible with the material available.

Out of the 679 returns that have been received, 37 do not give sufficient material for tabulation in our second series, so that the tables contain 642, as compared with 610 last year, and 536, 384 and 153 in the three previous years. In this respect there is a welcome, if hardly sufficient, improvement. These tables show that 49,090 persons were employed with aggregate wages amounting to $21,392,444 and product to $111,392,169; that the aggregate number of days in operation was 183,186, the average annual wage was $452.15, and the average daily wage $1.58. The depression in 1908, shown in last year's report, evidently had not continued.

RETURNS IN DETAIL

LUMBER MANUFACTURERS,

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
1	50,000	150	70,000	40	no	490	900	1,800	.....	100	.....
2	30,000	150	15,000	20	.....	300	300	.....	.....	20	.....
3	100,000	300	80,000	no	no	1,100	10,000	.....	.....	30	.....
4	75,000	170	100,000	no	no	380	1,303	500	.....	100	.....
5	30,000	270	35,000	no	no	42	310	.....	.....	23	.....
6	650,000	160	400,000	no	no	400	10,000	3,700	.....	500	.....
7	100,000	300	118,296	11	.....	897	1,037	.....	.....	50	...
8	10,000	290	.....	no	no	115	100	500	.....	8	....
9	40,000	150	30,000	10	.....	120	400	100	8,000	40	.....
10	300,000	135	175,000	no	no	700	2,250	2,500	.....	285	.....
11	300,000	182	275,000	no	no	330	5,300	.....	.....	100	.....
12	120,000	180	400,000	.....	yes	.....	10,700	3,000	....	220	.....
13	2,000	200	.....	.....	.....	.....	42	.....	.....	4	.....
14	15,000	300	25,000	no	no	80	95	1,000	.....	9	.....
15	90,000	300	202,683	10	.....	485	740	1,560	2,927	58	.....
16	100,000	160	50,000	no	no	.....	2,000	2,700	.....	95	.....
17	100,000	305	110,000	no	no	320	1,870	1,673	1,612	57	.....
18	200,000	145	210,000	8	.....	84	10,295	4,000	132,100	120	.....
19	1,500,000	180	1,000,000	30	.....	.....	24,000	....	.....	480	.....
20	75,000	300	50,000	25	.....	350	700	.....	.....	35	.....
21	200,000	180	1,000,000	15	.....	4,500	25,000	.....	.....	550	.....
22	200,000	150	100,000	.....	25	200	2,500	.....	.....	150	.....
23	25,000	75	14,000	.....	.....	70	225	.....	....	30	.....
24	30,000	300	25,000	.....	yes	70	700	.....	.....	20	.....
25	125,000	150	250,000	100	.....	345	5,535	27,704	.....	120	.....
26	10,000	240	22,000	no	no	35	60	600	.....	30	.....
27	1,003,617	158	362,248	21	.....	1,175	11,025	751	256,782	258	.....
28	16,000	275	3,000	no	no	22	105	.....	.....	3	.....
29	14,000	250	8,000	no	no	42	174	.....	.....	10	.....
30	475,000	233	515,000	no	no	5,106	11,659	10,000	12,800	565	.....
31	.....	298	500,350	.....	.....	1,216	5,110	.....	.....	173	.....
32	150,000	180	200,000	.....	yes	726	7,300	4,500	1,100	170	.....
33	50,000	300	150,000	no	no	350	3,000	5,000	.....	110	.....
34	60,000	300	.....	.....	.....	384	750	1,800	.....	25	.....
35	150,000	175	120,000	no	no	500	6,000	.....	.....	75	.....
36	1,500,000	150	400,000	.....	20	11,000	23,000	.....	10,000	200	.....
37	150,000	250	90,000	.....	.....	550	1,500	.....	.....	70	.....
38	.....	....	3,000,000	.....	.....	32,727	40,015	.....	.....	4,000	.....
39	3,000	290	.....	.....	.....	90	.....	.....	.....	.....	.....
40	1,500,000	170	1,300,000	no	no	3,000	30,000	.....	65,000	1,500	.....

PLANING MILLS, SASH AND DOOR

41	60,000	305	97,000	10	.....	450	600	.....	.....	45	.....
42	.....	170	.....	.....	.....	85	80	.....	.....	.....	.....
43	70,000	300	125,000	40	.....	450	2,300	7,000	5,000	50	.....
44	308,000	300	450,000	25	.....	272	2,360	3,500	7,000	110	.....
45	150,000	300	165,000	15	.....	500	1,000	.....	.....	38	.....
46	.....	170	.....	yes	.....	100	254	.....	.....	50	.....
47	100,000	300	90,000	10	.....	375	1,400	700	800	45	.....
48	100,000	300	85,000	no	no	255	1,087	450	.....	40	.....
49	40,000	200	.....	.....	.....	180	600	.....	.....	10	.....
50	40,000	300	40,000	7½	.....	1,050	563	1,000	450	60	.....
51	25,000	305	74,000	yes	.....	509	383	.....	.....	12	.....

FROM MANUFACTURERS.

SAWMILLS.—TABLE NO. 1.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
16,000	.....	18 75	10 50	.....	.....	4	3	6,000	no	no	.....	.....	1
5,000	.....	14 00	9 00	.....	.....	.....	.....	.....	no	no	.....	.....	2
17,000	.....	11 35	average	.....	.....	4	.....	.....	10	....	10	10	3
30,000	.....	18 00	9 00	.....	.....	6	1	6,000	no	no	.....	.....	4
7,200	.....	15 00	8 25	.....	.....	.....	.....	.....	no	no	.....	.....	5
100,000	.....	21 00	9 00	.....	.....	6	3	7,500	no	no	.....	.....	6
22,863	.....	13 50	9 00	.....	.....	4	2	6,700	10	....	10	10	7
3,500	.....	16 50	12 00	.....	.....	2	.....	1,500	no	no	.....	.....	8
5,000	.....	18 00	9 00	.....	.....	1	1	1,000	20	....	20	.....	9
49,000	.....	30 00	12 90	.....	.....	5	.....	4,500	no	no	.....	.....	10
33,500	.....	25 50	10 50	.....	.....	2	1	2,500	no	no	.....	.....	11
48,000	.....	23 50	8 25	.....	.....	3	1	3,000	no	no	.....	.....	12
.....	.....	15 00	10 00	.....	.....	.....	.....	.....	no	no	.....	.....	13
2,200	.....	9 00	7 50	.....	.....	.....	.....	.....	.....	....	.....	.....	14
27,335	.....	9 50	average	.....	.....	6	.....	4,674	no	no	.....	.....	15
28,000	.....	18 00	12 00	.....	.....	7	1	.....	no	no	.....	.....	16
30,000	.....	18 30	9 00	.....	.....	3	.....	4,400	no	no	.....	.....	17
32,000	.....	27 00	10 80	.....	.....	1	.....	1,000	10	....	10	.....	18
240,000	.....	39 00	9 75	.....	.....	11	.....	20,000	no	no	.....	.....	19
16,500	.....	18 90	10 00	.....	.....	6	.....	5,400	no	no	.....	.....	20
187,500	.....	21 00	8 25	.....	.....	15	.....	20,000	4	....	4	4	21
30,000	.....	22 50	9 75	.....	.....	3	.....	3,500	7½	....	7½	.....	22
3,000	.....	15 00	9 00	.....	.....	1	.....	600	no	no	.....	.....	23
10,000	.....	18 00	10 50	.....	.....	1	.....	900	.....	.....	.....	.....	24
53,335	.....	13 50	average	.....	.....	2	.....	3,700	10	....	10	10	25
6,000	.....	12 00	7 50	.....	.....	.....	.....	.....	no	no	.....	.....	26
81,035	.....	17 00	9 50	.....	.....	5	1	11,480	no	no	.....	.....	27
1,300	.....	10 00	8 50	.....	.....	1	.....	700	no	no	.....	.....	28
7,161	.....	15 00	9 00	.....	.....	1	.....	1,200	no	no	.....	.....	29
135,076	.....	8 00	average	.....	.....	8	.....	10,420	no	no	.....	.....	30
113,356	.....	22 50	10 50	.....	.....	.....	.....	.....	no	no	.....	.....	31
40,000	.....	25 50	10 50	.....	.....	2	1	2,120	no	no	.....	.....	32
50,000	.....	15 00	9 00	.....	.....	3	.....	5,000	5	....	5	5	33
14,200	.....	.....	.....	.....	.....	1	.....	1,200	10	....	10	10	34
15,000	.....	16 50	average	.....	.....	3	.....	2,000	no	no	.....	.....	35
56,000	.....	13 50	8 40	.....	.....	15	2	14,000	no	no	.....	.....	36
12,000	.....	19 50	10 50	.....	.....	.....	.....	.....	15	....	15	.....	37
.....	.....	21 00	10 50	.....	.....	.....	.....	.....	no	no	.....	.....	38
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	39
750,000	.....	16 50	9 90	.....	.....	15	.....	22,000	7	....	7	.....	40

FACTORIES, ETC.—TABLE NO. 2.

20,000	.....	13 20	9 90	.....	.....	2	1	2,500	5	....	.....	.....	41
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	42
35,000	.....	16 80	9 60	.....	.....	5	2	5,000	30	....	30	.....	43
40,000	.....	18 00	9 00	.....	.....	7	4	10,158	10	....	skilled	.....	44
22,000	.....	18 00	9 60	.....	.....	3	1	4,500	no	no	.....	.....	45
.....	.....	12 00	8 40	.....	.....	3	1	.....	no	no	.....	.....	46
22,000	.....	18 00	7 35	.....	.....	3	1	4,000	5	....	5	5	47
20,400	.....	15 00	7 05	.....	.....	.....	.....	1,695	10	....	10	10	48
6,600	.....	13 50	9 00	.....	.....	3	.....	2,500	.....	....	.....	.....	49
18,031	.....	16 50	7 50	.....	.....	3	1	2,500	7½	....	7½	.....	50
4,680	.....	18 00	10 00	.....	.....	1	1	1,520	no	no	.....	.....	51

RETURNS IN DETAIL

PLANING MILLS, SASH AND DOOR

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
52	19,000	300	40,000	10	.....	175	167	1,250	.....	12	.....
53	500,000	265	375,000	no	no	1,500	6,000	10,000	11,000	50	.....
54	100,000	200	300,000	yes	.....	490	1,090	3,000	600	22	.....
55	100,000	310	158,000	20	.....	630	3,600	5,500	3,000	45	.....
56	42,000	300	51,000	15	.....	133	670	200	.....	25	.....
57	75,000	305	120,000	15	.....	640	675	3,000	.....	30	.....
58	40,000	300	30,000	.....	5	56	372	410	1,767	14	.....
59	65,000	300	91,028	7	.....	445	755	.....	.....	57	.....
60	3,000	305	.....	.....	.....	.....	.....	.....	.....	6	.....
61	100,000	300	125,000	10	.....	.....	.....	.....	.....	50	.....
62	290,000	300	235,000	18	.....	1,560	2,750	7,000	10,300	140	.....
63	.....	300	.....	.....	.....	1,233	2,356	.....	.....	.....	.....
64	8,000	300	.....	.....	.....	23	105	.....	.....	3	.....
65	200,000	300	100,000	10	.....	1,650	1,800	2,000	.....	100	.....
66	5,000	312	6,000	5	.....	77	84	375	1,500	5	.....
67	75,000	250	125,000	.....	.....	564	2,646	.....	3,000	60	.....
68	14,586	300	37,159	yes	.....	118	7,000	180	.....	3	.....
69	50,000	300	75,000	20	.....	425	700	1,000	900	45	.....
70	4,397	304	30,153	.....	40	30	360	182	.....	8	.....
71	30,000	305	22,000	.....	.....	590	.....	.....	.....	25	.....
72	600,000	300	110,000	yes	.....	380	1,400	5,000	.....	65	.....
73	110,000	290	65,400	.....	.....	628	1,439	.....	11,047	40	.....
74	94,000	300	85,000	12	.....	1,100	400	.....	.....	31	.....

WOODWORKING FACTORIES, SPECIALTIES

75	100,000	300	160,000	10	.....	1,000	600	1,000	.....	60	20
76	202,500	305	150,000	10	.....	640	1,200	5,000	.....	200	.....
77	9,000	300	7,500	10	.....	55	58	1,000	.....	4	.....
78	55,000	305	108,000	10	.....	350	1,600	2,000	.....	90	15
79	4,000	300	5,000	no	no	40	28	.....	.....	.....	.....
80	9,700	230	10,500	.....	yes	67	.....	.....	.....	8	.....
81	25,165	300	26,356	.....	10	81	663	.....	2,950	25	.....
82	20,000	300	60,000	15	.....	252	750	.....	.....	35	.....
83	58,417	310	52,622	.....	5	104	1,174	.....	3,950	45	.....
84	10,000	300	51,877	10	.....	175	220	.....	1,200	30	.....
85	25,000	310	10,000	20	.....	60	80	.....	.....	10	.....
86	388,441	305	190,443	21	.....	600	850	750	5,930	98	20
87	45,000	305	90,000	20	.....	280	1,320	1,500	4,500	55	.....
88	45,000	280	36,295	.....	.....	231	651	15,608	7,009	16	4
89	30,000	300	25,000	no	no	36	616	.....	.....	9	22
90	20,000	250	40,650	.....	.....	136	573	1,352	.....	35	.....
91	12,000	250	28,000	10	.....	35	200	.....	.....	30	6
92	22,000	300	18,000	yes	.....	.....	220	1,700	.....	12	.....
93	50,000	300	100,000	30	.....	.....	300	500	1,200	30	.....
94	80,000	302	124,000	6	.....	446	1,069	439	1,062	52	.....
95	.....	292	28,500	.....	.....	74	530	.....	.....	32	2
96	5,000	300	12,000	yes	.....	50	75	.....	.....	10	.....
97	55,000	300	32,500	no	no	80	480	.....	.....	22	.....
98	22,400	300	75,000	50	.....	30	112	.....	.....	24	4
99	14,000	300	7,000	10	.....	100	50	.....	.....	5	.....
100	10,000	300	24,000	.....	.....	19	45	.....	.....	2	.....
101	500,000	265	375,000	no	no	1,500	6,000	10,000	11,000	500	.....
102	23,158	300	24,171	no	no	56	140	.....	.....	12	.....
103	20,000	300	75,000	no	no	178	400	.....	1,000	35	.....
104	20,000	300	130,000	no	no	600	925	.....	.....	60	40
105	33,000	290	55,000	20	.....	200	650	1,800	.....	36	.....
106	100,000	305	250,000	.....	.....	2,400	300	.....	.....	65	25
107	100,000	300	202,683	10	.....	563	740	1,760	1,010	58	.....

FROM MANUFACTURERS.

FACTORIES, ETC.—TABLE No 2.—Continued.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
4,880	.....	13 50	8 55	.....	.....	1	....	1,000	no	no	.....	.....	52
30,000	.....	16 50	9 00	.....	.....	4	2	7,000	no	no	.....	.....	53
10,000	.....	12 00	8 10	.....	.....	4	....	3,000	3½	....	3½	3½	54
20,000	.....	15 00	8 00	.....	.....	3	....	2,700	no	no	.....	.....	55
10,400	.....	13 50	9 00	.....	.....	3	....	1,600	no	no	.....	.....	56
14,000	.....	9 15	average	.....	.....	2	....	2,200	10	....	10	10	57
4,200	.....	12 00	8 00	.....	.....	2	1	2,250	.....	1	.....	.....	58
19,852	.....	14 25	8 25	.....	.....	1	1	900	.....	....	.....	.....	59
4,000	.....	22 50	.....	.....	.....	....	....	.....	no	no	.....	.....	60
37,552	.....	16 00	11 00	.....	.....	3	..	.....	no	no	.....	.....	61
63,000	.....	16 15	9 75	.....	.....	10	2	11,500	.....	....	.....	.....	62
16,997	.....	.....	.....	.....	.....	4	1	4,090	10	....	.....	10	63
1,300	.....	.....	9 00	.....	.....	....	....	.....	no	no	.....	.....	64
42,000	.....	15 00	10 50	.....	.....	7	1	7,000	5	....	5	.....	65
1,500	.....	13 50	7 50	.....	.....	....	....	.....	10	....	skilled	.....	66
20,000	.....	8 00	average	.....	.....	3	1	3,800	no	no	.....	.....	67
1,872	.....	12 50	average	.....	.....	....	1	104	.....	....	.....	.....	68
20,000	.....	18 00	12 00	.....	.....	7	1	4,700	5	....	5	.....	69
3,377	.....	19 50	9 00	.....	.....	2	....	1,340	.....	....	.....	.....	70
12,500	.....	10 00	average	.....	.....	2	....	.....	.....	....	.....	.....	71
30,000	.....	15 00	9 00	.....	.....	4	....	5,700	5	....	5	5	72
18,460	.....	18 00	9 10	.....	.....	6	1	9,598	.....	....	.....	.....	73
18,200	.....	14 00	11 00	.....	.....	3	....	2,500	.....	....	.....	.....	74

IN WOODEN WARE.—TABLE No. 3.

35,000	5,000	15 00	10 00	7 00	4 50	5	5	3,000	5	....	skilled	.....	75
52,000	.....	18 00	9 75	.....	.....	3	2	8,700	yes	....	yes	yes	76
1,976	.....	15 00	6 50	.....	.....	....	....	.....	20	....	unskill	.....	77
40,000	5,000	15 00	10 35	.....	6 00	2	1	1,900	no	no	.....	.....	78
.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	79
2,400	.....	13 50	7 50	.....	.....	....	....	.....	10	....	10	.....	80
9,468	.....	13 00	6 80	.....	.....	2	....	1,214	no	no	.....	.....	81
12,000	.....	14 25	7 50	.....	.....	1	1	1,200	.....	....	.....	.....	82
17,199	.....	11 10	7 80	.....	.....	2	....	2,842	no	no	.....	.....	83
13,061	.....	16 80	10 50	.....	.....	1	....	1,000	10	....	unskill	.....	84
6,000	.....	15 00	.....	.....	.....	....	....	.....	no	no	.....	.....	85
43,462	3,900	12 00	8 00	9 00	4 00	6	7	8,898	2½	....	3	2	86
29,500	.....	14 00	7 50	.....	.....	3	1	3,550	10	....	10	.....	87
7,617	1,278	13 50	.....	6 60	.....	3	....	5,080	.....	....	.....	.....	88
4,510	1,770	9 00	average	7 10	aver.	....	....	.....	no	no	.....	.....	89
13,666	.....	12 00	8 40	.....	.....	2	1	2,400	.....	....	.....	.....	90
12,000	both	12 00	9 00	6 00	.....	2	....	1,500	5	....	5	5	91
8,500	.....	15 00	10 50	.....	.....	1	....	.....	no	no	.....	.....	92
14,200	.....	16 50	13 50	.....	.....	4	....	4,250	5	....	.....	5	93
19,543	.....	12 00	9 00	.....	.....	4	....	4,020	7½	....	7½	7½	94
10,806	both	9 30	5 25	4 50	3 00	....	....	.....	4½	....	skilled	.....	95
4,200	.....	14 00	8 00	.....	.....	....	....	.....	no	no	.....	.....	96
9,000	.....	15 00	9 00	.....	.....	....	....	.....	no	no	.....	.....	97
10,800	900	9 00	average	5 00	aver.	5	....	3,910	no	no	.....	.....	98
2,500	.....	27 00	.....	.....	.....	....	....	.....	10	....	.....	.....	99
1,560	.....	13 50	9 00	.....	.....	1	1	2,112	.....	....	.....	.....	100
30,000	.....	18 00	9 00	.....	.....	4	2	7,000	no	no	.....	.....	101
6,442	.....	11 00	average	.....	.....	....	....	.....	5	....	.....	.....	102
15,000	.....	8 60	average	.....	.....	3	....	2,000	no	no	.....	.....	103
20,000	9,000	15 00	9 00	.....	4 50	3	2	3,700	.....	....	.....	.....	104
15,000	.....	13 20	9 60	.....	.....	3	....	4,200	4	....	4	.....	105
40,000	both	9 00	average	for	all	10	10	.....	yes	....	girls	.....	106
29,410	.....	15 00	6 75	.....	.....	6	....	4,800	yes	....	yes	yes	107

RETURNS IN DETAIL

FURNITURE MANUFACTURERS; BANK, STORE

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
108	1,000	275	2,879	yes	.....	51	46	.....	.....	2	.....
109	42,552	305	55,293	27	.....	45	503	620	614	42	.....
110	50,000	305	120,000	27	.....	350	1,000	.....	.....	40	4
111	200,000	305	200,000	.....	.....	600	1,500	.....	.....	80	.....
112	65,000	300	85,000	16	.....	1,455	1,470	8,160	16,425	80	.....
113	9,000	....	.....	.....	.....	.....	.....	.....	.....	.....	.....
114	40,000	305	65,000	30	.....	90	1,300	1,500	.....	50	.....
115	10,000	300	52,000	yes	.....	230	295	100	270	9	4
116	80,000	310	110,000	25	.....	250	1,000	.....	.....	80	.....
117	110,000	300	80,000	20	.....	282	2,000	.....	.....	80	.....
118	110,000	300	40,000	.....	10	240	200	.....	11,100	30	.....
119	.....	303	60,000	20	.....	260	100	.....	.....	45	.....
120	15,000	300	50,000	no	no	400	1,100	.....	.....	60	.....
121	60,000	300	80,000	no	no	655	2,418	.....	.....	30	5
122	400,000	300	260,000	20	.....	300	4,500	1,500	5,000	250	30
123	220,000	305	137,200	20	.....	885	2,400	.....	22,314	95	.....
124	225,000	290	290,000	no	no	467	575	.....	21,798	190	.....
125	100,000	280	100,000	10	.....	250	360	.....	.....	65	.....
126	73,294	296	55,662	59	.....	397	694	.....	7,109	31	.....
127	250,000	305	180,000	no	no	850	1,650	3,000	10,000	80	16
128	43,777	260	45,750	10	.....	450	586	.....	10,942	30	.....
129	500,000	300	465,000	10	.....	1,688	2,335	15,000	20,000	65	.....
130	462,907	290	306,040	7	.....	503	1,218	19,832	.....	260	24
131	30,000	300	64,000	15	.....	120	420	1,824	36,063	48	1
132	150,000	300	90,000	20	.....	253	300	.....	.....	50	.....
133	100,000	300	140,215	30	.....	323	855	16,327	.....	126	1
134	60,000	300	30,000	no	no	.....	500	.....	.....	32	.....
135	25,000	288	20,000	10	.....	325	300	400	.....	10	3
136	75,000	300	80,000	10	.....	127	1,850	1,000	1,400	60	1
137	.....	....	97,000	.....	.....	950	1,800	.....	.....	50	.....
138	48,000	300	70,000	40	.....	105	1,600	.....	5,300	50	2
139	100,000	300	85,000	.....	12	255	1,088	450	.....	45	.....
140	125,000	305	100,000	10	.....	375	1,100	.....	.....	75	.....
141	20,000	300	50,000	20	.....	65	350	.....	.....	25	.....
142	.....	300	140,000	no	no	290	400	.....	.....	85	.....
143	.....	300	1,000,000	.....	.....	6,055	25,360	.....	.....	600	50

CARRIAGES AND OTHER VEHICLES AND PARTS

144	75,100	280	55,000	30	.....	96	780	.....	.....	35	.....
145	166,000	305	176,222	6	.....	1,728	3,981	.....	32,691	77	2
146	125,000	305	500,000	30	.....	.....	.....	6,000	.....	50	.....
147	.....	306	396,606	5	.....	2,687	3,262	.....	9,107	315	.....
148	600,000	300	600,000	11	.....	500	3,233	8,000	.....	325	6
149	100,000	295	125,000	20	.....	400	1,400	.....	.....	55	.....
150	.....	300	400,000	.....	.....	197	4,800	.....	.....	182	3
151	50,000	300	50,000	10	.....	125	110	.....	.....	30	10
152	25,000	300	30,000	no	no	48	500	.....	.....	14	1
153	75,683	310	23,500	no	no	611	217	.....	.....	16	.....
154	135,000	300	185,000	25	.....	540	3,175	.....	20,300	75	.....
155	.....	....	.....	.....	.....	138	.....	.....	.....	40	.....
156	28,000	300	18,058	.....	.....	144	648	.....	.....	8	1
157	200,000	290	252,000	10	.....	1,500	2,600	5,000	13,500	135	.....
158	100,000	305	150,000	15	.....	540	1,200	5,000	.....	75	.....
159	50,000	305	34,500	15	.....	97	740	200	.....	12	.....
160	150,000	300	120,000	70	.....	400	720	10,000	.....	40	.....
161	40,000	300	75,000	.....	10	300	600	.....	3,000	30	5
162	324,000	305	345,425	75	.....	590	2,985	5,446	21,524	115	.....

FROM MANUFACTURERS.

AND OFFICE FITTINGS.—TABLE No. 4.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
751	.....	15 00	.....	.....	.....	...	...	.....	no	no	.....	.....	108
19,636	.....	13 50	9 00	.....	.....	2	....	1,735	18	....	18	.....	109
15,000	both	6 80	average	for	all	3	1	.....	yes	....	yes	.....	110
52,000	.....	16 30	12 00	.....	.....	18	2	10,000	10	....	.....	.....	111
37,655	.....	9 40	average	.....	.....	5	1	4,455	6½	....	sk'd 10	.....	112
.....	.....	.....	.....	.....	.....	...	...	.....	.....	....	.....	.....	113
20,000	.....	15 50	10 50	.....	.....	2	....	1,900	yes	....	.....	.....	114
5,760	1,025	13 00	average	5 10	aver.	...	...	.....	yes	....	yes	yes	115
28,000	.....	11 40	9 60	.....	.....	4	....	4,000	5	....	unsk'd	.....	116
28,000	.....	12 00	8 25	.....	.....	2	1	2,600	10	....	10	10	117
13,900	.....	12 00	average	.....	.....	3	....	4,300	5	....	5	.....	118
19,000	.....	10 80	average	.....	.....	2	1	.....	15	....	15	15	119
24,000	.....	12 60	9 00	.....	.....	2	....	2,220	5	....	5	5	120
15,600	1,400	16 50	10 50	12 60	7 20	1	2	2,000	10	....	skilled	.....	121
120,300	6,200	18 00	9 60	6 00	3 30	15	7	11,500	15	....	15	15	122
39,767	.....	12 00	9 00	.....	.....	3	1	3,475	yes	....	.....	.....	123
65,636	.....	12 30	8 70	.....	.....	19	....	28,625	10	....	.....	10	124
29,000	.....	12 00	9 00	.....	.....	3	....	4,000	10	....	10	.....	125
14,476	.....	14 25	6 00	.....	.....	1	....	900	no	no	.....	.....	126
36,000	3,500	14 00	10 00	8 00	4 00	10	3	12,000	yes	....	.....	.....	127
13,117	.....	13 50	7 50	.....	.....	2	1	2,300	5	....	5	5	128
35,662	.....	15 00	10 20	.....	.....	14	1	13,351	20	....	.....	20	129
90,264	3,991	12 15	8 00	6 00	3 50	6	5	18,299	10	....	10	10	130
17,593	.....	10 80	8 40	.....	.....	1	1	1,550	10	....	10	10	131
25,000	.....	11 25	6 75	.....	.....	1	....	4,300	15	....	15	.....	132
29,492	250	10 00	8 00	5 00	.....	4	1	2,697	5	....	.....	.....	133
12,500	.....	12 00	9 00	.....	.....	1	1	1,700	10	....	10	.....	134
3,000	300	12 00	7 50	6 00	3 00	...	...	.....	no	no	.....	.....	135
22,000	450	11 10	8 00	9 00	.....	1	1	1,450	5	....	5	5	136
.....	.....	13 50	12 00	.....	.....	...	...	.....	yes	....	.....	.....	137
17,500	500	10 50	6 00	6 00	3 60	3	2	3,500	.....	....	.....	.....	138
23,000	.....	15 00	7 05	.....	.....	2	....	1,700	7½	....	7½	7½	139
30,000	.....	10 50	8 25	.....	.....	1	2	.....	yes	....	.....	.....	140
8,000	.....	12 10	9 00	.....	.....	2	1	3,000	5	....	5	5	141
32,100	.....	14 25	10 50	.....	.....	3	3	3,500	yes	....	.....	.....	142
342,000	15,375	13 80	9 00	7 20	5 11	....	....	.....	10	....	.....	.....	143

THEREOF AND MOTORS.—TABLE No. 5.

14,000	.....	14 25	9 60	.....	.....	1	1	1,600	no	no	.....	.....	144
33,247	both	13 50	8 10	6 00	4 20	9	2	13,600	11	....	11	.....	145
25,000	.....	18 00	10 50	.....	.....	8	3	.....	yes	....	.....	.....	146
110,336	.....	13 20	9 00	.....	.....	7	2	9,188	no	no	.....	.....	147
132,051	2,340	13 50	7 50	9 00	.....	9	4	16,553	.....	....	.....	.....	148
21,500	.....	8 00	average	.....	.....	3	2	7,000	10	....	10	10	149
84,000	.....	15 00	9 00	6 60	3 00	...	...	.....	yes	....	.....	.....	150
18,000	both	15 00	10 50	8 00	5 00	2	1	4,000	5	....	5	.....	151
6,000	300	10 50	8 40	7 00	.....	....	1	300	no	no	.....	.....	152
5,720	.....	14 25	8 25	.....	.....	...	...	.....	no	no	.....	.....	153
26,100	.....	12 00	9 00	.....	.....	3	1	3,500	5	....	5	.....	154
.....	.....	12 00	7 20	.....	.....	...	...	.....	.....	....	.....	.....	155
4,187	312	12 00	average	.....	.....	1	1	730	.....	....	.....	.....	156
60,000	.....	21 00	10 50	.....	.....	5	1	6,000	2½	....	2½	2½	157
20,000	.....	10 80	9 00	.....	.....	...	...	.....	no	no	.....	.....	158
5,057	.....	8 00	average	.....	.....	1	....	1,500	yes	....	yes	.....	159
20,000	.....	15 00	10 50	.....	.....	1	1	1,250	10	....	unskil.	.....	160
12,000	1,500	15 00	10 50	6 00	3 00	5	1	4,500	10	....	10	10	161
53,567	.....	9 50	average	.....	.....	8	1	13,958	no	no	.....	.....	162

RETURNS IN DETAIL

AGRICULTURAL IMPLEMENTS, FARMING HAND

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
163	150,000	280	22,000	yes	.....	156	806	.....	.....	27	.....
164	42,000	315	25,000	5	.....	50	395	.....	.....	15	.....
165	300,000	305	225,000	yes	.....	.....	.....	.....	.....	30	30
166	500,000	305	500,000	20	.....	1,000	900	2,000	5,000	120	.....
167	200,000	300	500,000	25	.....	2,500	300000	.....	.....	20	65
168	2.000,000	250	500,000	10	.....	923	1,696	.....	.....	220	.....
169	18,100	300	30,620	6	.....	95	436	324	.....	15	1
170	600,000	250	500,000	no	no	187	3,500	.....	50,000	150	30
171	75,000	305	100,000	80	.....	120	200	10,000	2,000	35	3
172	.....	305	5,500	.....	.....	120	107	.....	.....	8	.....
173	18,000	300	10,000	no	no	34	135	500	.....	12	.....
174	130,000	300	100,000	20	.....	187	99	.....	.....	35	.....
175	200,000	310	125,000	53	.....	500	900	.....	.....	70	1
176	40,000	300	30,000	25	.....	105	395	.....	10,900	14	10
177	200,000	305	148,000	.....	.....	.....	1,153	.....	.....	60	.....
178	650,000	313	150,000	no	no	792	2,236	.....	.....	75	1
179	18,000	300	25,000	100	.....	35	350	1,000	.....	20	.....

PIANO, ORGAN AND MUSICAL INSTRUMENT

180	40,000	300	60,000	25	.....	200	300	.....	.....	28	1
181	100,000	300	120,000	2	.....	80	372	31,000	.....	95	2
182	175,000	300	151,932	30	.....	700	2,157	1,500	.....	107	1
183	1,000	280	4,516	8	.....	.....	17	.....	.....	3	.....
184	29,500	305	68,000	9	.....	.....	1,750	1,000	.....	55	.....
185	35,000	300	84,063	25	.....	140	399	.....	.....	30	.....
186	100,000	300	65,000	yes	.....	382	558	500	.....	35	.....
187	600,000	282	375,000	no	no	1,500	3,000	5,000	10,000	225	.....

WOOD-PULP FACTORIES, PAPER MILLS, STATIONERY

188	60,000	300	93,000	50	.....	379	540	12,000	.....	25	75
189	25,000	305	35,700	10	.....	70	.....	.....	2,865	14	2
190	190,000	306	204,000	7	.....	1,100	600	5,300	9,436	48	4
191	30,000	240	50,000	no	no	155	.....	7,000	5,000	12	.....
192	25,000	305	30,000	15	.....	.....	.....	10,000	500	12	6
193	500,000	286	538,331	20	.....	1,439	1,323	16,000	398,307	135	51
194	2,000	305	4,075	4	.....	11	15	.....	.....	2	7
195	10,000	305	26,000	10	.....	38	127	75	925	6	18
196	100,000	275	47,347	no	no	240	147	.....	.....	14	.....
197	195,371	235	191,440	.....	10	74	569	46,038	147,052	65	20
198	10,000	305	30,000	no	no	63	150	.....	.....	4	16
199	102,500	305	139,000	35	.....	372	400	10,000	9,650	55	25
200	15,000	305	17,500	no	no	45	210	1,500	.....	7	.....
201	5,000	300	30,000	no	no	75	50	.....	.....	10	.....

FROM MANUFACTURERS.

TOOLS AND DAIRY MACHINERY.—TABLE NO. 6.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
7,000	.....	12 00	7 80	.....	.....	1	1	1,000	.....	....	.....	.....	163
4,500	.....	10 50	7 50	.....	.....	1	1	1,000	.....	....	.....	.....	164
15,080	both	5 00	average	for	all	3	2	.....	no	no	.....	.....	165
62,000	.....	15 00	9 75	.....	.....	5	15	16,000	10	....	10	10	166
12,000	24,000	12 00	average	7 50	aver.	3	6	5,500	12½	....	12½	12½	167
105,694	.....	14 10	8 70	.....	.....	18	6	23,058	1	....	1	.....	168
7,833	360	10 44	average	7 00	.....	2	....	2,316	7	....	7	7	169
55,000	both	9 50	.....	6 00	.....	8	2	15,000	no	no	.....	.....	170
20,000	800	11 40	average	5 30	aver.	5	....	3,600	yes	....	yes	yes	171
2,750	.....	12 00	7 50	.....	.....	....	....	.....	.....	....	.....	.....	172
5,400	.....	9 00	average	.....	.....	1	1	1,200	no	no	.....	.....	173
12,000	.....	15 00	10 50	.....	.....	3	1	3,300	5	....	5	.....	174
40,000	540	18 00	9 75	10 00	.....	3	1	6,500	no	no	.....	.....	175
6,800	3,000	15 00	10 50	6 00	4 50	2	1	2,100	20	....	20	.....	176
35,799	.....	11 70	average	.....	.....	4	....	5,654	no	no	.....	.....	177
20,500	500	10 50	7 50	.....	.....	4	....	5,900	no	no	.....	.....	178
80,000	.....	14 25	9 00	.....	.....	2	....	1,000	8	....	skilled	.....	179

FACTORIES.—TABLE NO. 7.

20,000	both	18 00	12 00	.....	.....	6	1	6,000	20	....	.....	.....	180
45,000	600	12 00	10 50	6 00	.....	2	2	4,500	no	no	.....	.....	181
52,785	300	18 00	9 00	5 00	.....	4	1	6,800	no	no	.....	.....	182
900	.....	5 50	3 50	.....	.....	....	....	.....	.....	....	.....	.....	183
26,747	.....	17 50	.....	.....	.....	.....	.....	.....	5	....	5	5	184
14,344	.....	14 10	7 50	.....	.....	....	1	.....	yes	....	.....	.....	185
15,410	.....	16 50	9 00	.....	.....	3	....	2,717	yes	....	.....	.....	186
109,000	.....	18 00	10 50	.....	.....	6	1	10,700	no	no	.....	.....	187

FACTORIES.—TABLE NO. 8.

12,500	17,500	12 00	8 00	9 00	6 00	3	2	4,600	.....	....	.....	.....	188
7,372	both	9 25	average	for	all	1	2	.....	10	....	.....	.....	189
24,318	936	14 00	8 00	.....	4 50	3	....	3,900	no	no	.....	.....	190
15,000	.....	9 75	average	.....	.....	2	....	2,400	no	no	.....	.....	191
5,000	1,200	19 00	11 00	.....	4 40	....	2	3,200	5	....	5	5	192
58,083	14,315	19 50	9 00	9 00	4 80	11	1	13,351	7½	....	7½	.....	193
825	1 800	13 00	3 00	5 00	.....	....	....	.....	no	no	.....	.....	194
2,500	5,000	15 00	7 00	6 25	3 75	....	1	350	no	no	.....	.....	195
8,001	.....	10 50	9 00	.....	.....	....	....	.....	no	no	.....	.....	196
29,183	both	14 25	9 00	.....	5 00	5	....	7,352	no	no	.....	.....	197
2,400	4,800	15 00	10 00	8 00	4 00	....	....	.....	no	no	.....	.....	198
28,000	8,000	16 00	8 00	7 50	4 75	9	7	7,975	10	....	10	10	199
2,000	.....	5 70	average	.....	.....	....	....	.....	.....	....	.....	.....	200
4,000	.....	8 00	average	.....	.....	1	....	1,000	no	no	.....	.....	201

RETURNS IN DETAIL

FOUNDRIES AND ROLLING MILLS, BRIDGE AND STRUCTURAL

Office No.	Capital employed, including plant.	No. days in operation during year 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
202	208,000	295	303,000	11	.....	930	75	.....	57,000	125	.....
203	125,000	300	60,000	100	.....	250	.....	.....	.....	35	.....
204	110,000	313	95,000	25	.....	67	365	.....	.....	25	.....
205	75,000	305	48,000	.....	5	385	160	.....	.....	23	.....
206	10,000	267	55,203	30	.....	91	192	.....	.....	45	.....
207	50,000	305	75,000	no	no	488	636	.....	.....	45	.....
208	85,254	300	158,652	28	.....	292	486	.....	.....	95	.....
209	200,000	305	120,000	10	.....	900	185	10,000	2,000	115	2
210	160,000	270	165,000	10	.....	506	765	2,500	9,000	111	.....
211	15,000	260	11,460	40	.....	102	82	334	.....	5	.....
212	600,000	300	75,000	yes	.....	1,200	300	.....	2,500	100	.....
213	350,000	267	70,000	10	.....	1,684	900	872	257	45	1
214	21,504	300	56,018	8	.....	94	254	9,455	.....	41	.....
215	.....	124	136,620	.....	.....	.....	.....	.....	.....	125	.....
216	35,000	300	55,000	.....	.....	105	323	3,000	.....	40	.....
217	15,000	305	10,000	2	.....	60	86	400	.....	8	.....
218	1,200	305	16,500	yes	.....	120	110	.....	.....	9	.....
219	128,430	296	384,007	21	.....	700	1,436	.....	.....	150	.....
220	532,973	307	628,093	76	.....	510	3,331	27,561	.....	310	.....
221	175,448	242	309,399	.....	17	284	1,467	3,886	.....	135	.....
222	60,000	300	300,000	no	no	1,685	835	.....	.....	130	.....
223	20,000	300	20,000	no	no	320	150	4,000	.....	16	.....
224	50,000	300	30,000	no	no	300	300	.....	391	22	.....
225	30,000	305	6,785	.....	.....	280	375	.....	.....	13	.....
226	25,000	293	50,000	25	.....	430	450	15,000	.....	40	.....

STOVE MANUFACTURERS, HOT AIR FURNACES

227	97,352	290	51,553	26	.....	229	264	.....	.....	38	.....
228	200,000	300	240,000	33⅓	.....	1,043	1,542	131	15,751	100	.....
229	200,000	313	125,000	53	.....	525	980	.....	.....	70	1
230	75,000	305	126,000	50	.....	63	1,448	1,800	.....	100	.....
231	60,000	310	55,000	25	.....	115	406	325	.....	50	.....
232	348,700	262	180,500	33	.....	2,169	1,370	14,000	37,075	106	.....
233	350,000	299	230,000	no	no	2,400	3,300	.....	26,000	220	.....
234	40,000	300	80,000	.....	yes	100	1,200	.....	10,000	30	.....
235	10,000	300	10,000	100	.....	15	56	1,200	.....	6	.....
236	100,000	260	97,000	.....	10	1,537	2,002	.....	1,400	120	.....
237	52,000	240	32,000	20	.....	197	135	.....	.....	21	1
238	72,000	235	70,000	15	.....	677	320	1,500	.....	45	.....
239	.....	....	250,000	.....	.....	200	3,575	.....	.....	140	3
240	100,000	300	80,000	10	.....	213	349	800	.....	42	.....
241	100,000	290	110,000	10	.....	400	1,200	1,500	3,000	80	.....
242	40,000	305	70,000	.....	.....	405	406	.....	.....	35	.....

FROM MANUFACTURERS.

IRON WORKS.—TABLE No. 9.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
74,200	.....	12 12	average	.....	.....	2	2	6,800	no	no	.....	.....	202
15,500	.....	8 85	average	.....	.....	2	1	.....	10	....	10	.....	203
11,929	.....	15 00	9 60	.....	.....	2	1	4,200	no	no	.....	.....	204
8,580	.....	15 60	8 25	.....	.....	1	....	800	no	no	.....	.....	205
23,223	.....	17 40	10 95	.....	.....	....	....	.....	no	no	.....	.....	206
27,974	.....	18 99	10 50	.....	.....	1	....	1,200	no	no	.....	.....	207
65,034	.....	19 50	9 00	.....	.....	....	....	.....	no	no	.....	.....	208
77,000	700	18 00	10 95	10 50	.....	7	1	8,000	yes	....	skilled	.....	209
50,000	.....	15 75	10 00	.....	.....	12	2	10,300	1	....	skilled	.....	210
3,347	.....	15 00	9 00	.....	.....	1	....	625	yes	....	.....	.....	211
24,000	.....	18 00	10 50	.....	.....	3	....	2,000	no	no	.....	.....	212
19,439	470	15 00	10 80	9 00	.....	2	1	3,170	10	....	10	.....	213
15,568	.....	15 00	8 25	.....	.....	4	....	5,100	11	....	unskill	.....	214
51,825	.....	19 80	.....	.....	.....	....	....	.....	.....	....	.....	.....	215
12,151	.....	15 00	9 00	.....	.....	4	1	4,500	.....	....	.....	.....	216
4,000	.....	9 00	.....	.....	.....	2	....	800	no	no	.....	.....	217
2,600	.....	15 00	7 50	.....	.....	....	....	.....	yes	....	.....	.....	218
80,618	.....	10 75	average	.....	.....	6	....	5,539	no	no	.....	.....	219
174,110	.....	11 00	average	.....	.....	6	1	8,042	.....	....	.....	.....	220
60,218	.....	11 15	average	.....	.....	5	1	3,929	no	no	.....	.....	221
65,000	.....	10 60	average	.....	.....	5	....	.....	7½	....	.....	.....	222
6,000	.....	15 00	7 50	.....	.....	....	....	.....	10	....	skilled	.....	223
11,711	.....	10 65	average	.....	.....	....	....	.....	.....	....	.....	.....	224
4,333	.....	.....	7 50	.....	.....	....	....	.....	.....	....	.....	.....	225
23,000	.....	16 50	10 50	.....	.....	4	1	3,300	no	no	.....	.....	226

AND HEATING APPARATUS.—TABLE No. 10.

19,574	.....	15 00	9 60	.....	.....	3	1	2,536	no	no	.....	.....	227
52,643	.....	18 60	13 50	.....	.....	14	1	22,934	7½	....	7½	.....	228
42,000	540	18 60	9 60	10 00	.....	4	1	6,500	no	no	.....	.....	229
45,296	.....	9 00	average	.....	.....	2	1	1,960	no	no	.....	.....	230
23,500	.....	13 50	7 95	.....	.....	4	....	1,750	25	....	25	.....	231
46,749	.....	16 50	10 50	.....	.....	14	3	19,125	7½	....	7½	7½	232
85,000	.....	14 70	10 50	.....	.....	25	3	21,700	no	no	.....	.....	233
18,000	.....	12 00	average	.....	.....	5	1	6,000	.....	....	.....	.....	234
2,500	.....	15 00	7 50	.....	.....	2	....	1,500	30	....	.....	.....	235
42,507	.....	8 24	average	.....	.....	7	2	6,648	no	no	.....	.....	236
9,800	260	14 50	9 00	.....	5 00	1	1	1,460	2	....	.....	.....	237
24,882	.....	16 50	12 00	.....	.....	4	1	2,843	no	no	.....	.....	238
.....	.....	16 50	10 20	9 90	.....	....	....	.....	no	no	.....	.....	239
23,000	.....	10 95	average	.....	.....	5	....	6,500	10	....	10	10	240
46,000	.....	15 00	10 50	.....	.....	....	2	1,000	no	no	.....	.....	241
20,000	.....	23 40	12 15	.....	.....	5	....	4,000	5	....	skilled	.....	242

RETURNS IN DETAIL

ENGINES, BOILERS AND MACHINERY FACTORIES; ENGINEERS

Office No.	Capital employed, including plant.	No. days in operation during year 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
243	500,000	305	280,000	.....	.....	.....	.....	.....	.....	175	.....
244	40,000	280	30,000	.....	35	262	210	.....	.....	15	.....
245	80,000	300	40,000	25	.....	115	430	.....	.....	26	.....
246	15,500	200	13,000	25	.....	.....	22	300	.....	1	.....
247	2,000	300	.....	10	.....	.....	12	.....	.....	2	.....
248	15,000	305	15,000	10	.....	26	100	.....	1,800	13	.....
249	79,000	309	80,508	yes	.....	237	1,312	3,657	13,922	77	.....
250	77,150	300	37,824	15½	.....	250	868	395	.....	46	6
251	30,000	313	35,000	10	.....	250	90	.....	.....	6	.....
252	15,000	300	20,000	15	.....	70	65	2,000	.....	17	.....
253	.....	305	300,000	10	.....	503	1,765	.....	.....	115	4
254	25,000	300	60,000	15	.....	.....	120	.....	.....	26	1
255	100,000	300	125,000	10	.....	500	800	12,500	45,000	60	.....
256	60,000	310	30,000	.....	5	300	230	.....	.....	16	.....
257	300	200	.....	.....	yes	.....	.....	.....	.....	1	.....
258	18,700	300	10,000	15	.....	43	244	.....	.....	12	.....
259	23,568	305	46,870	50	.....	648	284	11,500	1,000	29	4
260	130,000	300	75,000	.....	20	1,200	1,800	.....	.....	45	.....
261	35,000	306	25,000	no	no	200	150	200	.....	15	1
262	250,000	300	150,000	100	.....	1,341	1,576	.....	.....	90	.....
263	11,000	305	15,000	no	no	.....	90	.....	.....	10	.....
264	52,000	183	50,946	.....	.....	302	417	1,258	15,580	53	.....
265	49,165	300	43,103	30	.....	161	298	.....	.....	26	.....
266	.....	305	40,000	10	.....	400	320	400	.....	20	.....
267	55,000	305	31,000	no	no	180	570	.....	.....	20	.....
268	40,000	305	38,750	15	.....	93	346	.....	2,200	34	.....
269	70,000	300	52,000	30	.....	166	270	.....	.....	35	.....
270	1,700	300	15,000	20	.....	23	140	.....	.....	22	1
271	400,000	300	425,000	yes	.....	1,200	3,500	10,000	.....	225	.....
272	30,000	305	25,000	10	.....	181	233	1,200	.....	25	.....
273	15,000	310	15,000	.....	yes	159	50	.....	.....	10	.....
274	40,000	300	90,000	40	.....	50	475	.....	.....	65	.....
275	2,000	305	2,500	no	no	75	30	.....	.....	2	.....
276	240,000	308	176,000	.....	20	204	.....	5,700	22,350	110	.....
277	100,000	310	100,000	10	.....	435	300	3,000	.....	17	.....
278	.....	300	100,000	no	no	175	1,800	50,000	.....	50	.....
279	18,000	300	30,620	20	.....	95	436	270	.....	15	.....
280	250,000	280	600,000	10	.....	3,782	818	15,000	65,000	308	.....
281	35,000	305	35,000	yes	.....	124	84	250	3,346	16	.....
282	50,000	300	120,000	20	.....	.....	362	500	500	35	.....
283	.....	302	325,000	.....	.....	1,722	7,690	.....	.....	230	.....
284	3,300	286	15,000	.....	.....	100	150	.....	.....	16	1
285	.....	305	239,420	26	.....	1,856	1,107	27,000	.....	290	5
286	5,000	305	10,000	.....	.....	50	85	1,000	60	4	.....
287	198,000	300	350,000	20	.....	1,500	6,500	9,000	.....	325	.....

METALLIC ROOFING, BOLTS AND NUTS, AND

288	15,000	300	50,000	20	.....	165	210	.....	.....	30	.....
289	.....	305	50,000	.....	10	440	350	8,000	33,000	33	.....
290	100,000	300	100,000	.....	10	300	600	.....	.....	41	.....
291	40,000	300	25,000	.....	.....	.....	450	.....	.....	20	.....
292	.....	305	40,000	no	no	26	115	.....	.....	9	.....

FROM MANUFACTURERS.

AND MACHINE SHOPS.—TABLE No. 11.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	Office No.
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
100,000	.....	11 20	average	.....	.....	9	....	.....	yes	....	.....	.....	243
6,750	.....	16 80	11 40	.....	.....	1	2	2,740	10	....	10	10	244
13,000	.....	10 00	average	.....	.....	2	3	3,000	10	....	10	.....	245
1,080	.....	33 00	.....	.....	.....	1	....	.....	.....	....	.....	.....	246
.....	.....	15 00	.....	.....	.....	....	....	.....	.....	....	.....	.....	247
3,500	.....	6 00	average	.....	.....	1	1	1,240	yes	....	.....	.....	248
34,354	.....	14 40	9 00	.....	.....	8	1	10,713	no	no	.....	.....	249
12,750	398	12 00	7 50	.....	3 60	2	1	2,400	15	....	15	.....	250
5,000	.....	15 00	11 00	.....	.....	1	1	3,000	10	....	10	10	251
5,000	.....	15 00	7 50	.....	.....	1	1	1,200	5	....	.....	.....	252
74,438	both	14 25	9 00	7 00	.....	8	4	10,476	.....	....	.....	.....	253
12,000	600	9 25	average	12 00	.....	1	1	3,000	no	no	.....	.....	254
32,000	.....	12 00	9 00	.....	.....	4	2	3,300	5	....	5	.....	255
10,500	.....	16 50	9 75	.....	.....	3	....	2,000	no	no	.....	.....	256
1,200	.....	15 00	9 75	.....	.....	1	....	1,080	.....	....	.....	.....	257
4,096	.....	16 50	9 00	.....	.....	1	1	1,512	no	no	.....	.....	258
14,851	both	18 00	12 00	7 00	.....	3	3	6,951	5	....	5	.....	259
20,000	.....	12 75	8 40	.....	.....	5	1	8,000	no	no	.....	.....	260
8,000	.....	12 00	8 40	.....	4 00	....	1	2,000	.....	....	.....	.....	261
33,412	.....	19 50	11 10	.....	.....	....	....	.....	yes	....	yes	.....	262
6,710	.....	18 00	9 00	.....	.....	....	....	.....	10	....	skilled	.....	263
14,006	.....	8 80	average	.....	.....	1	1	2,235	5	....	5	.....	264
17,360	.....	18 00	7 00	.....	.....	4	....	3,144	15	....	15	.....	265
6,000	.....	21 00	12 00	.....	.....	2	....	2,000	no	no	.....	.....	266
6,800	.....	15 00	9 00	.....	.....	2	....	4,000	.....	....	.....	.....	267
9,800	.....	13 50	9 00	.....	.....	3	....	3,800	yes	....	yes	.....	268
19,500	.....	13 95	11 25	.....	.....	1	....	600	5	....	5	5	269
4,680	416	16 50	7 50	8 00	.....	....	1	300	20	....	20	.....	270
92,000	.....	8 20	average	.....	.....	12	4	.....	yes	....	.....	.....	271
9,000	.....	7 20	average	.....	.....	2	1	.....	.....	....	.....	.....	272
6,300	.....	14 85	average	.....	.....	....	....	.....	no	no	.....	.....	273
36,000	.....	18 00	10 50	.....	.....	3	1	2,000	10	....	10	10	274
1,500	.....	18 00	.....	.....	.....	3	1	1,750	5	....	5	5	275
49,000	.....	13 50	9 00	.....	.....	5	1	5,000	no	no	.....	.....	276
11,880	.....	14 00	average	.....	.....	1	4	3,985	no	no	.....	.....	277
20,000	.....	13 50	9 75	.....	.....	....	....	7,000	no	no	.....	.....	278
7,833	.....	12 75	9 75	.....	.....	1	1	1,960	10	....	10	10	279
160,985	.....	15 60	9 60	.....	.....	40	10	42,000	3	....	3	3	280
7,827	.....	15 00	9 60	.....	.....	3	....	.....	.....	....	.....	.....	281
14,000	.....	16 20	12 00	.....	.....	3	....	2,600	10	....	skilled	.....	282
81,650	.....	16 00	9 50	.....	.....	25	5	27,150	no	no	.....	.....	283
8,000	300	15 75	9 00	6 00	.....	....	....	.....	5	....	5	.....	284
67,621	2,365	18 00	12 00	9 00	.....	47	9	56,239	10	....	10	10	285
2,500	.....	12 00	6 00	.....	.....	....	1	175	no	no	.....	.....	286
147,000	.....	17 00	10 50	.....	.....	30	....	41,000	.....	....	.....	.....	287

LIGHT IRONWARE.—TABLE No. 12.

20,000	.....	21 00	12 00	.....	.....	1	....	800	7½	....	7½	.....	288
16,942	.....	14 10	9 00	.....	.....	4	2	3,460	12½	....	12½	12½	289
20,000	.....	15 00	9 60	.....	.....	1	2	2,000	no	no	.....	.....	290
5,500	.....	21 00	.....	.....	.....	2	1	1,850	.....	....	.....	.....	291
4,300	.....	19 50	15 00	.....	.....	1	....	2,500	no	no	.....	.....	292

RETURNS IN DETAIL

METALLIC ROOFING, BOLTS AND NUTS AND

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
293	90,000	305	120,000	20	.....	160	318	.....	.....	32	.....
294	.....	305	50,000	yes	.....	.....	.....	.....	.....	35	.....
295	135,000	300	415,000	25	.....	320	1,094	4,447	75,000	65	.....
296	3,500	305	5,200	8	.....	50	15	.....	.....	5	.....
297	70,000	310	40,979	3	.....	300	50	3,056	13,612	26	.....
298	35,700	300	23,000	.....	20	140	331	.....	1,500	10	.....
299	7,000	300	8,873	.....	3	.....	35	.....	.....	10	.....
300	100,000	305	80,000	30	.....	300	40	.....	.....	36	6
301	70,000	275	160,000	10	.....	360	640	.....	.....	30	.....
302	60,000	305	150,000	no	no	200	598	1,500	9,000	75	3
303	330,000	300	540,000	20	.....	2,500	6,000	50,000	.....	240	.....
304	120,000	300	150,000	30	.....	236	1,200	.....	.....	40	10
305	42,000	325	25,000	5	.....	65	330	.....	.....	15	.....
306	150,000	300	112,839	.....	.....	134	649	.....	.....	40	16
307	7,000	300	8,872	.....	3	.....	35	300	.....	10	.....
308	123,200	305	75,000	5	.....	26	932	4,000	.....	30	.....
309	200,000	305	250,000	10	.....	225	3,400	25,000	.....	100	.....
310	125,000	305	130,000	.....	.....	600	675	.....	.....	70	.....
311	145,000	300	5,900	no	no	78	171	.....	.....	9	.....

WIRE FENCE, WIRE ROPE AND

312	12,500	270	30,500	yes	.....	150	202	.....	.....	15	1
313	575,000	300	486,360	12½	.....	2,945	3,537	37,895	.....	300	.....
314	70,000	300	70,000	no	no	125	320	.....	.....	8	.....
315	50,000	288	113,810	10	.....	15	426	5,176	11,397	16	.....
316	2,500	295	5,000	.....	yes	8	7	.....	.....	2	.....
317	375,000	300	320,000	15	.....	46	676	50,000	.....	100	.....
318	30,000	300	26,000	10	.....	100	50	.....	.....	18	.....
319	57,250	300	42,264	10	.....	98	425	869	2,884	12	.....
320	150,000	275	300,000	10	.....	475	30	.....	11,000	35	.....
321	100,000	275	375,000	10	.....	10	762	.....	75,150	60	.....
322	50,000	300	35,000	.....	65	200	333	.....	.....	15	2

BRASS AND COPPERWARE FACTORIES AND

323	10,000	305	.....	.....	yes	150	156	.....	.....	4	.....
324	259,000	305	250,000	100	.....	1,100	1,060	.....	.....	135	.....
325	5,000	270	10,000	1	.....	4	13	.....	.....	4	.....
326	30,000	300	55,000	10	.....	300	300	500	750	30	.....
327	.....	300	50,000	10	.....	25	500	1,000	.....	14	.....
328	60,000	300	40,000	70	.....	109	483	5,000	.....	60	2
329	405,121	....	.....	.....	.....	82	375	.....	6,635	6	.....
330	26,000	250	72,667	22	.....	167	400	.....	2,001	32	.....
331	20,000	279	26,000	20	.....	39	160	4,000	.....	24	2
332	35,000	300	65,000	8	.....	175	372	.....	.....	50	10
333	10,000	300	30,000	yes	.....	37	168	.....	.....	18	.....
334	24,250	305	31,158	.....	.....	112	547	.....	.....	25	3
335	170,000	300	127,000	27	.....	676	800	500	.....	60	.....
336	135,000	300	127,000	25	.....	676	800	2,000	5,200	70	.....
337	434,847	301	330,720	8	.....	1,298	4,866	.....	6,782	117	.....
338	50,000	305	80,000	40	.....	155	1,000	3,000	.....	40	6

FROM MANUFACTURERS.

LIGHT IRONWARE.—TABLE NO. 12.—Continued.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%			
18,500	.....	11 33	average	.....	.....	3	4	4,800	yes	....	yes	.....	293
20,000	.....	21 00	12 00	.....	.....	5	....	3,913	5	....	skilled	.....	294
25,720	.....	13 50	10 50	.....	.....	10	4	11,850	10	....	10	.....	295
3,200	.....	13 50	.....	.....	.....	....	....	.....	.....	....	.....	.....	296
12,488	.....	15 00	10 20	.....	.....	1	1	1,590	no	no	.....	.....	297
5,100	.....	10 00	average	.....	.....	1	1	1,200	.....	....	.....	.....	298
4,250	.....	12 45	8 25	.....	.....	....	....	.....	7½	....	.....	.....	299
20,670	2,400	18 00	10 50	8 00	.....	....	....	6,000	no	no	.....	.....	300
9,000	.....	19 50	12 75	.....	.....	8	3	.....	no	no	.....	.....	301
34,609	900	18 00	10 50	6 00	.....	5	2	6,900	7½	....	7½	.....	302
137,000	.....	21 00	9 90	.....	.....	9	3	19,000	5	....	5	.....	303
20,000	2,800	13 50	9 00	5 50	.....	2	2	5,500	.....	....	.....	.....	304
3,500	.....	12 00	7 50	.....	.....	2	1	1,600	.....	....	.....	.....	305
20,150	4,000	14 25	9 00	6 75	4 80	3	....	4,550	no	no	.....	.....	306
4,250	.....	13 50	9 00	.....	.....	....	....	.....	5	....	.....	.....	307
15,100	.....	18 00	9 00	.....	.....	1	....	600	5	....	5	5	308
50,000	.....	18 00	9 00	.....	.....	6	3	10,000	5	....	5	5	309
30,000	.....	8 50	average	.....	.....	....	....	.....	no	no	.....	.....	310
4,350	.....	9 66	average	.....	.....	1	....	1,200	no	no	.....	.....	311

WIRE CLOTH FACTORIES.—TABLE NO. 13.

7,200	200	10 66	average	.....	4 45	1	1	800	.....	....	.....	.....	312
116,238	.....	17 25	10 50	.....	.....	7	6	17,996	10	....	10	10	313
2,300	.....	15 00	10 50	.....	.....	3	1	3,200	no	no	.....	.....	314
8,989	.....	18 00	10 50	.....	.....	7	3	4,110	no	no	.....	.....	315
590	.....	.....	6 00	.....	.....	....	....	.....	no	no	.....	.....	316
29,000	.....	6 00	average	.....	.....	8	8	12,000	5	....	.....	.....	317
5,000	.....	18 00	10 50	.....	.....	4	1	3,000	.....	....	.....	.....	318
3,756	.....	16 50	10 50	.....	.....	5	5	2,300	30	....	30	.....	319
18,250	.....	23 00	12 00	.....	.....	5	3	10,000	7½	....	7½	.....	320
34,000	.....	18 00	10 50	.....	.....	9	1	10,065	10	....	10	10	321
9,000	.....	10 59	average	.....	.....	....	....	.....	.....	....	.....	.....	322

PLUMBERS' SUPPLIES.—TABLE NO. 14.

2,600	.....	11 00	.....	.....	.....	....	....	.....	no	no	.....	.....	323
58,125	.....	16 50	11 40	.....	.....	....	....	.....	yes	....	.....	.....	324
3,825	.....	21 00	12 00	.....	.....	....	....	.....	1	....	1	1	325
16,000	.....	13 50	9 75	.....	.....	....	....	.....	no	no	.....	.....	326
8,000	.....	11 43	average	.....	.....	....	....	.....	10	....	10	10	327
18,431	400	16 50	6 75	.....	4 50	2	1	3,496	10	....	10	10	328
1,826	.....	12 00	.....	.....	.....	2	....	2,010	no	no	.....	.....	329
13,389	.....	18 00	8 25	.....	.....	1	....	1,000	no	no	.....	.....	330
13,000	676	19 50	12 00	7 50	.....	....	1	364	12	....	12	12	331
17,226	1,950	10 50	8 10	.....	3 90	2	4	4,100	10	....	10	10	332
9,927	.....	18 00	9 00	.....	.....	1	....	780	10	....	10	.....	333
11,405	both	20 00	10 00	.....	6 00	....	....	.....	5	....	.....	.....	334
33,767	.....	16 50	11 40	.....	.....	3	1	4,900	5	....	skilled	.....	335
33,767	.....	15 60	13 50	.....	.....	4	1	4,500	5	....	5	.....	336
57,431	.....	9 82	average	.....	.....	30	5	24,778	yes	....	.....	.....	337
14,000	1,500	18 00	12 00	6 00	3 60	3	2	5,300	10	....	10	10	338

RETURNS IN DETAIL

SILVER AND PLATEDWARE FACTORIES,

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
339	150,000	300	129,068	30	.....	534	1,175	2,000	2,079	65	4
340	25,000	300	98,491	31	.....	.....	250	.....	776	12	7
341	260,130	300	159,537	38	.....	879	1,010	4,441	8,595	84	5
342	50,000	300	30,000	20	.....	50	150	.....	.....	25	.....
343	8,000	300	5,000	.....	14	79	20	.....	.....	4	4
344	44,000	300	.....	.....	.....	.....	.....	.....	.....	15	15

WOOLLENS, COTTONS, LINENS AND

345	600,000	271	595,115	25½	.....	.....	.....	10,129	.....	140	162
346	200,000	278	176,000	36	.....	466	360	.....	8,000	14	40
347	20,000	200	25,000	.....	25	60	210	.....	.....	40	.....
348	300,000	280	280,000	.....	3	628	510	.....	.....	80	170
349	20,000	226	18,000	no	no	140	.....	.....	.....	7	7
350	18,000	225	11,000	.....	10	150	200	.....	.....	3	3
351	50,000	294	21,000	no	no	45	400	.....	1,000	8	10
352	125,000	300	225,000	20	.....	1,350	780	20,000	40,000	95	90
353	197,000	300	328,252	12½	.....	700	2,671	.....	62,089	75	82
354	30,000	300	50,000	no	no	.....	240	.....	.....	25	15
355	125,000	307	150,000	50	.....	230	150	5,000	75,000	70	50
356	10,000	240	15,000	25	.....	60	70	.....	300	4	20
357	75,000	300	75,000	yes	.....	.....	.....	.....	.....	25	4
358	69,800	290	104,000	15	.....	700	500	2,000	.....	20	25
359	12,000	305	6,600	1½	.....	123	325	150	850	6	.....
360	17,000	260	7,500	.....	5	190	250	.....	.....	4	4
361	1,500,000	288	1,987,000	20	.....	8,500	1,800	50,000	.....	604	410
362	300,000	300	325,000	40	.....	2,800	4,000	.....	.....	120	127
363	60,000	280	60,000	.....	.....	275	300	.....	.....	17	20
364	75,000	300	70,000	.....	.....	500	500	.....	.....	21	15
365	20,000	240	18,700	10	.....	225	132	100	185	30	2
366	4,000	175	8,250	.....	25	60	210	.....	.....	30	5
367	.....	305	35,825	.....	.....	239	188	.....	.....	8	28
368	40,000	300	40,000	no	no	400	400	.....	.....	7	3

KNITTED GOODS FACTORIES; MEN'S

369	40,000	300	.....	yes	.....	71	1,500	.....	.....	15	100
370	35,000	300	50,000	10	.....	125	600	700	.....	20	22
371	80,200	312	139,559	10	.....	306	2,631	8,809	.....	25	70
372	125,000	293	98,000	40	.....	541	1,521	300	73,000	7	25
373	150,000	265	160,000	yes	.....	1,248	160	.....	.....	45	70
374	2,500	200	1,500	no	no	23	.....	.....	.....	.....	.....
375	55,000	275	200,000	.....	.....	200	1,100	1,200	31,984	44	52
376	25,600	300	27,000	no	no	145	295	.....	.....	3	32
377	250,000	305	300,000	25	.....	400	300	45,000	.....	50	200
378	10,500	300	41,000	52	.....	18	448	1,225	.....	7	16
379	105,000	293	85,000	10	.....	235	850	4,400	.....	21	30
380	200,000	300	300,000	5	.....	900	350	5,000	.....	80	165
381	300,000	300	360,000	12	.....	900	2,000	6,000	48,000	85	125
382	38,000	295	96,000	20	.....	165	982	.....	550	19	27
383	.....	300	75,000	.....	.....	.....	.....	.....	.....	14	21
384	50,000	245	66,000	57	.....	225	412	1,600	694	19	90

FROM MANUFACTURERS.

JEWELRY FACTORIES.—TABLE No. 15.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
39,008	both	24 75	11 25	7 50	5 00	2	1	3,468	.....	....	.....	.....	339
9,056	both	18 00	10 50	10 00	5 00	2	1	1,584	.....	....	.....	.....	340
43,283	both	15 75	9 00	7 00	5 00	6	5	16,347	no	no	.....	.....	341
9,000	.....	24 00	.....	.....	.....	1	2	2,000	10	....	skilled	.....	342
2,000	400	10 00	average	.....	4 00	....	....	.....	no	no	.....	.....	343
.....	.....	.....	.....	.....	.....	4	6	.....	yes	....	yes	yes	344

YARNS.—TABLE No. 16.

55,769	49,456	11 25	6 64	7 39	4 17	4	....	3,463	no	no	.....	.....	345
7,600	9,000	12 00	average	5 00	aver.	3	1	3,764	.....	....	.....	.....	346
7,000	.....	9 00	7 50	.....	.....	....	....	.....	no	no	.....	.....	347
27,280	38,100	10 00	6 00	8 25	4 00	3	....	3,500	no	no	.....	.....	348
2,011	1,550	9 00	5 40	6 00	4 80	....	....	.....	8	....	8	.....	349
1,100	500	10 50	7 50	5 70	4 00	1	1	540	no	no	.....	.....	350
3,470	2,070	10 50	6 00	6 00	3 00	1	....	600	no	no	.....	.....	351
33,900	16,015	10 50	9 00	8 10	4 80	3	3	3,800	no	no	.....	.....	352
59 067	19,533	13 50	9 00	6 00	4 50	4	2	5,675	5	....	.....	5	353
7,000	3,000	5 60	average	4 00	aver.	2	....	.....	no	no	.....	.....	354
20,000	15,000	13 50	7 50	9 00	4 50	4	1	3,500	10	....	10	10	355
2,000	4,000	9 00	.....	6 00	.....	....	1	450	.....	....	.....	.....	356
12,000	both	8 30	average	for	all	....	....	.....	5	....	.....	.....	357
16,450	both	7 62	average	for	all	2	....	2,400	5	....	5	.....	358
4,200	.....	15 00	9 30	.....	.....	1	....	1,000	2½	....	2½	.....	359
1,602	550	10 05	6 75	.....	4 00	1	1	580	2½	....	2½	.....	360
232,000	108000	8 10	.....	5 40	.....	13	1	15,000	no	no	.....	.....	361
98,000	both	8 65	average	for	all	5	....	.....	yes	....	yes	.....	362
10,000	both	16 50	9 60	6 60	4 50	....	....	.....	7½	....	7½	.....	363
14,500	both	15 00	7 50	.....	.....	2	....	3,000	no	no	.....	.....	364
6,350	800	9 00	8 00	7 50	.....	....	....	.....	no	no	.....	.....	365
5,000	.....	12 00	9 00	.....	.....	2	....	.....	.....	....	.....	.....	366
.....	.....	17 00	6 00	7 00	4 00	....	....	.....	5	....	.....	.....	367
8,100	both	12 00	9 00	6 50	4 00	....	1	312	no	no	.....	.....	368

AND WOMEN'S UNDERWEAR.—TABLE No. 17.

.....	.....	.....	.....	.....	.....	5	7	.....	yes	....	.....	.....	369
7,000	6,700	13 50	8 10	9 00	7 50	1	....	800	no	no	.....	.....	370
10,558	14,945	18 00	7 50	10 50	5 25	3	....	3,000	.....	....	.....	.....	37[illegible]
3,600	7,400	18 00	9 00	9 00	4 50	2	1	2,100	20	....	20	....	
14,500	11,500	5 30	average	for	all	2	3	6,500	no	no	..		
.....	.....	.....	.....	.....	.....	....	....	.....	.....	....			
19,312	14,108	9 50	average	5 90	aver.	5	5	6,931	no				
7,450	both	4 30	average	for	all	....	1	.....					
29,000	66,000	11 40	average	6 50	aver	4	2	..					
1,000	3,000	9 00	5 00	8 00	4 0[illegible]								
6,391	6,032	15 00	6 60	8 10	[illegible]								
70,000	both	5 70	average	for									
70,500	both	13 20	10 80	9 [illegible]									
6,500	7,000	16 50	9 15										
10,322	both	6 10	averag[illegible]										
3,990	16,128	5 12	aver[illegible]										

RETURNS IN DETAIL

CLOTHING FACTORIES—MEN'S AND WOMEN'S.

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
385	70,000	300	275,000	5	.....	1,163	1,456	1,700	3,482	15	140
386	25,000	305	200,000	yes	.....	.....	.....	.....	.....	75	both
387	40,000	305	60,000	20	.....	50	200	2,500	.....	4	8
388	40,200	275	190,000	25	.....	190	345	1,500	16,000	25	135
389	13,996	250	26,476	12	.....	93	103	.....	.....	.....	10
390	137,575	305	432,424	30	.....	1,705	412	1,894	24,617	350	both
391	20,000	300	75,000	25	.....	.....	200	1,500	.....	6	75
392	.....	300	350,000	.....	.....	1,500	1,500	.....	.....	30	250
393	150,000	300	270,000	12½	.....	1,000	1,500	500	.....	192	28
394	200,000	278	176,000	36	.....	466	360	.....	8,000	14	50
395	.....	305	370,000	.....	.....	1,400	932	.....	.....	88	125
396	72,000	300	30,511	13	.....	109	700	28,500	.....	12	41
397	60,000	300	145,000	5	.....	1,250	1,525	700	.....	12	160
398	180,000	288	122,600	yes	.....	.....	.....	12,000	.....	10	175

BOOT AND SHOE MANUFACTURERS;

399	30,000	305	275,000	15	.....	.....	625	5,000	35,000	89	15
400	50,000	300	100,000	no	no	325	350	.....	.....	30	20
401	89,500	300	245,000	3	.....	840	1,310	900	.....	70	33
402	35,000	230	30,000	no	no	100	650	.....	18,000	17	6
403	73,000	300	103,447	15½	.....	108	785	634	1,569	39	16
404	600	305	1,500	33	.....	37	.....	1,000	.....	.....	.....
405	40,000	305	120,000	yes	.....	147	36,000	.....	.....	60	30
406	27,942	285	54,848	16	.....	44	300	2,300	1,900	18	36
407	600,000	283	1,309,665	17	.....	1,239	5,409	.....	.....	162	123
408	193,100	303	242,700	47	.....	803	2,004	2,442	18,012	80	35
409	120,000	300	300,000	25	.....	800	1,000	2,000	.....	65	85
410	50,000	275	60,000	20	.....	230	620	.....	.....	25	1
411	200,000	275	400,000	.....	.....	866	1,589	5,000	.....	118	117
412	50,000	305	150,000	100	.....	.....	.....	.....	.....	45	20
413	80,000	300	150,000	5	.....	485	440	500	.....	60	40
414	90,000	300	280,000	8	.....	.....	817	.....	.....	87	48
415	46,000	300	70,000	7½	.....	44	670	5,000	.....	29	8
416	120,000	290	300,000	yes	.....	.....	1,200	.....	.....	160	80
417	50,000	280	60,000	20	.....	138	555	.....	.....	30	10
418	80,000	305	125,000	.....	.....	148	38,000	.....	.....	50	25
419	75,000	250	230,000	yes	.....	85	640	1,500	2,500	80	20
420	40,000	300	175,000	3	.....	125	600	.....	.....	45	50
421	40,662	285	100,312	3	.....	95	191	15,400	2,600	34	16
[illegible]	100,000	300	77,472	13¼	.....	562	.....	493	.....	23	16
[illegible]	[illegible],000	305	125,000	no	no	162	40,000	.....	.....	50	25

FUR MANUFACTURERS, DRESSERS AND DYERS;

						321	350	.....	1,000	5	15
						[illegible]	240	600	.....	10	20
						1	,236	.....	.....	65	25
							000	.....	.....	30	.....
						5		1,200	8,085	80	25

FROM MANUFACTURERS.

WHITEWEAR, MILLINERY, ETC.—TABLE No. 18.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c	$ c.	$ c.	$ c.			$	%	%	%	%	
10,400	41,600	21 00	8 25	13 00	5 25	9	2	13,440	.....	....	.....	.....	385
25,000	both	7 50	average	for	all	2	....	2,000	yes	....	yes	yes	386
2,075	2,500	12 00	5 00	9 00	5 00	3	....	3,400	20	....	20	20	387
35,000	both	11 00	average	5 50	aver.	5	2	3,500	5	....	5	5	388
.....	3,159	.....	.....	11 28	6 00	1	....	450	no	no	.....	.....	389
95,406	both	17 00	9 00	8 00	5 00	43	12	44,288	yes	....	.....	.....	390
4,000	20,000	15 00	.....	5 00	.....	2	2	.....	.....	....	.....	.....	391
100,000	both	15 00	7 00	9 00	4 00	....	....	.....	7½	....	.....	.....	392
65,000	both	6 00	average	for	all	13	11	18,000	no	no	.....	.....	393
7,600	9,000	12 00	average	4 00	aver.	3	1	3,764	.....	....	.....	.....	394
100,000	both	19 00	10 00	13 00	8 00	....	....	.....	12½	....	.....	.....	395
6,270	6,300	18 00	6 00	7 50	4 20	2	1	3,269	10	....	10	10	396
3,000	52,000	13 50	6 00	10 50	4 25	....	....	.....	no	no	.....	.....	397
27,000	both	3 11	average	for	all	10	....	.....	.....	....	.....	.....	398

FELT FOOTWEAR.—TABLE No. 19.

25,000	7,000	18 00	6 00	9 00	4 50	2	1	3,000	.....	....	.....	.....	399
25,000	both	10 00	average	for	all	2	2	3,500	10	....	10	10	400
43,600	13,400	12 50	average	8 10	aver.	8	1	5,787	no	no	.....	.....	401
7,342	1,100	11 10	9 00	6 10	4 50	1	....	1,000	no	no	.....	.....	402
13,557	3,840	15 00	9 00	9 00	4 50	3	....	3,120	5½	....	5½	15	403
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	404
25,000	7,000	8 00	average	4 60	aver.	....	....	.....	.....	....	.....	.....	405
7,618	8,813	16 50	9 00	9 60	5 70	3	2	3,300	no	no	.....	.....	406
82,623	41,218	12 75	9 00	8 55	6 00	22	8	30,000	10	....	10	10	407
49,615	both	8 60	average	for	all	3	....	3,450	33	....	.....	.....	408
95,000	both	12 66	average	for	all	7	3	.....	.....	....	.....	.....	409
10,000	275	9 00	average	6 00	.....	2	1	2,100	no	no	.....	.....	410
48,586	21,505	12 60	10 26	7 38	6 96	18	3	16,643	10	....	10	.....	411
25,000	both	7 70	average	for	all	9	4	7,000	no	no	.....	.....	412
50,000	both	10 00	average	for	all	....	....	.....	.....	....	.....	.....	413
64,500	both	9 55	average	for	all	....	3	.....	yes	....	.....	.....	414
12,000	2,000	12 50	8 00	7 50	4 00	5	4	5,150	yes	....	yes	yes	415
75,000	both	12 50	9 50	8 00	5 00	....	....	.....	5	....	.....	.....	416
9,500	both	12 00	8 40	6 00	4 50	....	....	.....	10	....	10	.....	417
40,000	6,000	16 00	average	5 00	aver.	4	2	.....	no	no	.....	.....	418
26,000	7,000	8 00	average	8 50	aver.	3	....	2,500	4	....	4	4	419
33,000	both	20 00	7 50	12 00	4 75	3	2	.....	yes	....	.....	.....	420
12,489	4,877	7 82	average	6 50	aver.	5	1	7,600	15	....	15	.....	421
15,789	both	8 10	average	for	all	2	....	3,500	5	....	skilled	.....	422
20,000	5,000	8 00	average	4 00	aver.	3	....	.....	no	no	.....	.....	423

HAT AND CAP FACTORIES.—TABLE No. 20.

2,500	3,400	25 00	3 50	10 00	2 50	3	1	2,600	no	no	.....	.....	424
4,500	3,500	13 00	7 50	10 00	5 00	....	....	.....	15	....	15	.....	425
32,000	11,000	18 00	12 00	9 00	4 50	6	2	.....	10	....	10	10	426
10,000	.....	15 00	12 00	.....	.....	....	....	.....	no	no	.....	.....	427
0,000	both	17 00	7 50	9 50	5 50	5	1	4,320	15	....	15	.....	428

RETURNS IN DETAIL

TANNERIES, HARNESS AND LEATHER

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
429	150,000	300	160,000	10	.....	600	650	.....	10,000	60	8
430	20,000	310	40,000	30	.....	140	220	.....	.....	10	1
431	2,250	300	.....	.....	.....	.....	32	.....	.....	3	.....
432	80,000	300	101,000	2	.....	161	374	1,709	.....	25	.....
433	12,000	300	15,000	.....	yes	25	2,000	200	5,000	4	.....
434	50,000	300	100,000	10	.....	600	500	.....	.....	30	2
435	15,394	300	43,426	10	.....	134	102	7,000	1,448	12	21
436	150,000	305	170,000	3	.....	375	791	1,200	.....	45	27
437	10,000	305	15,000	.....	15	50	68	.....	.....	4	.....
438	139,066	306	180,129	22	.....	96	1,223	3,286	158,967	35	.....
439	48,000	310	50,000	no	no	362	338	.....	.....	20	1
440	10,000	75	3,000	.....	.....	55	17	.....	.....	1	.....
441	900,000	303	1,000,000	20	.....	1,400	5,200	39,000	.....	140	3
442	40,000	300	61,000	no	no	125	564	2,000	.....	14	.....
443	12,000	300	25,000	.....	20	90	300	.....	.....	4	.....
444	16,000	300	83,000	no	no	44	215	.....	.....	5	.....
445	25,000	310	75,000	40	.....	75	350	.....	4,000	20	35
446	200,000	300	500,000	20	.....	1,500	500	.....	.....	150	60
447	58,391	300	36,637	14½	.....	184	221	233	2,151	15	.....
448	.....	313	75,000	25	.....	.....	874	.....	.....	45	1
449	90,000	305	100,574	50	.....	161	374	1,709	.....	24	.....
450	68,000	260	127,000	10	.....	370	791	1,000	.....	23	1
451	100,000	305	175,000	20	.....	400	1,700	5,000	.....	40	.....
452	100,000	312	150,000	no	no	1,200	1,800	.....	.....	40	27
453	70,000	250	126,000	20	.....	376	790	1,000	6,833	20	.....
454	100,000	300	200,000	9	.....	221	2,130	500	.....	40	100

FLOUR AND FEED MILLS; CEREAL

455	196,552	279	141,142	18	.....	524	991	8,189	115,861	30	16
456	250,000	313	700,000	no	no	1,350	3,500	4,000	2,760	35	2
457	50,000	300	109,229	.....	4	690	896	.....	4,376	10	.....
458	75,000	300	500,000	25	.....	400	700	8,000	.....	14	2
459	35,000	300	132,503	17	.....	225	450	.....	660	9	.....
460	15,000	300	40,000	.....	1	84	197	200	1,424	6	.....
461	30,000	307	90,000	no	no	108	650	500	.....	6	1
462	300,000	300	260,000	yes	.....	200	3,000	1,500	.....	40	2
463	50,000	275	75,000	.....	10	157	1,000	2,000	2,100	7	1
464	29,000	290	107,000	.....	15	273	303	.....	967	10	.....
465	55,000	305	115,000	5	.....	194	360	3,000	1,700	7	1
466	75,000	312	.....	.....	.....	.....	.....	.....	.....	20	.....
467	30,000	307	115,000	no	no	222	1,038	1,000	.....	7	1
468	12,000	314	35,000	no	no	128	175	.....	.....	3	.....
469	43,460	300	355,142	no	no	103	1,854	2,000	2,000	16	1
470	16,000	315	45,000	50	.....	385	190	300	.....	3	1
471	30,000	305	220,000	no	no	140	400	.....	750	12	1
472	10,000	300	.....	.....	.....	64	75	.....	.....	4	.....
473	75,000	300	500,000	100	.....	140	900	.....	.....	22	.....
474	40,000	300	130,000	10	.....	400	600	5,000	3,000	16	1
475	30,000	300	70,000	no	no	130	1,500	.....	.....	36	60
476	35,000	300	70,000	no	no	610	515	150	625	6	.....
477	20,000	290	87,000	no	no	25	37	.....	.....	2	.....
478	60,000	300	239,000	no	no	535	720	.....	11,633	18	1
479	17,000	300	35,000	.....	30	125	200	.....	.....	4	.....

FROM MANUFACTURERS.

GOODS FACTORIES.—TABLE No. 21.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
27,000	2,200	13 50	9 00	5 50	aver.	3	2	4,000	5	....	.....	.....	429
5,000	200	12 75	9 00	.....	4 00	....	1	315	10	....	skilled	.....	430
.....	.....	11 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	431
9,603	.....	15 00	8 75	.....	.....	1	....	2,000	no	no	.....	.....	432
4,000	.....	9 00	.....	.....	.....	.....	.....	.....	no	no	.....	.....	433
12,000	600	8 00	average	6 00	.....	2	1	1,000	10	....	10	10	434
5,008	4,910	17 00	9 00	6 50	2 50	3	1	4,264	7	....	7	.....	435
18,500	7,000	15 00	8 00	6 00	4 00	2	....	1,300	8	....	8	.....	436
1,880	.....	16 20	2 60	.....	.....	.....	.....	.....	no	no	.....	.....	437
14,993	.....	10 00	8 00	.....	.....	1	....	520	5	....	5	.....	438
12,000	250	11 00	.....	5 00	.....	6	1	4,870	5	....	5	5	439
130	.....	10 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	440
70,000	1,300	10 00	average	8 70	aver.	12	....	24,000	10	....	10	10	441
5,324	.....	10 50	7 75	.....	.....	.....	.....	.....	no	no	.....	.....	442
2,000	.....	12 00	10 00	.....	.....	.....	.....	.....	8	....	8	.....	443
2,600	.....	10 00	average	.....	.....	.....	.....	.....	.....	.....	.....	.....	444
7,500	7,500	18 00	7 00	7 00	5 00	4	1	.....	25	....	25	.....	445
50,000	10,000	15 60	10 80	7 80	4 80	3	2	6,000	8	....	8	.....	446
4,874	.....	13 50	7 50	.....	.....	1	1	1,112	yes	....	yes	yes	447
15,413	520	7 00	average	10 00	.....	6	1	.....	10	....	10	10	448
7,603	.....	15 00	9 00	.....	.....	.....	.....	.....	no	no	.....	.....	449
12,247	312	12 00	9 60	6 00	.....	....	1	2,512	10	....	10	10	450
20,000	.....	10 00	average	.....	.....	1	1	3,000	7	....	skilled	.....	451
18,000	7,000	13 50	4 75	5 25	3 75	10	2	10,000	5	....	5	.....	452
10,059	.....	13 50	9 60	6 00	.....	2	1	2,500	10	....	10	.....	453
12,000	20,000	6 00	average	4 00	aver.	3	4	6,000	no	no	.....	.....	454

FOOD FACTORIES.—TABLE No. 22.

17,507	3,890	12 00	average	6 00	aver.	1	....	800	.....	....	.....	.....	455
17,500	800	19 50	9 00	8 00	aver.	3	2	3,700	10	....	10	10	456
5,861	.....	12 60	8 70	.....	.....	3	....	4,000	no	no	.....	.....	457
15,000	1,000	15 00	11 00	9 00	.....	1	2	1,600	yes	....	.....	.....	458
3,669	.....	14 00	9 50	.....	.....	....	1	2,000	.....	....	.....	.....	459
2,496	.....	9 00	7 50	.....	.....	.....	.....	.....	.....	....	.....	.....	460
2,500	300	8 00	average	6 00	.....	.....	.....	.....	.....	....	.....	.....	461
11,000	500	18 00	10 00	10 00	6 00	3	1	5,000	5	....	5	.....	462
2,768	350	15 65	8 35	7 60	.....	....	1	350	10	....	10	.....	463
6,542	.....	15 00	9 00	.....	.....	4	....	.....	no	no	.....	.....	464
4,150	400	15 00	9 00	8 10	.....	.....	.....	.....	5	....	5	5	465
12,000	.....	11 50	average	.....	.....	3	....	.....	no	no	.....	.....	466
3,077	260	8 80	average	.....	5 00	....	.....	.....	no	no	.....	.....	467
2,000	.....	12 80	average	.....	.....	.....	.....	.....	10	....	.....	.....	468
6,800	500	14 50	9 50	10 00	.....	1	....	4,000	no	no	.....	.....	469
1,678	.....	10 75	average	.....	.....	.....	.....	.....	no	no	.....	.....	470
4,500	300	10 50	9 00	6 00	.....	2	1	2,100	3	....	3	3	471
1,590	.....	12 00	average	.....	.....	.....	.....	.....	no	no	.....	.....	472
11,000	.....	15 00	9 00	.....	.....	2	1	2,400	no	no	.....	.....	473
8,500	450	13 50	8 25	9 00	.....	2	....	1,650	15	....	15	15	474
6,000	6,000	13 50	9 00	.....	4 50	1	1	1,200	no	no	.....	.....	475
2,600	.....	12 00	9 00	.....	.....	1	1	1,600	.....	....	.....	.....	476
650	.....	9 00	6 00	.....	.....	1	....	500	.....	....	.....	.....	477
9,872	300	12 00	9 50	.....	.....	3	1	2,800	no	no	.....	.....	478
2,160	.....	12 00	9 60	.....	.....	1	....	480	.....	....	.....	.....	479

RETURNS IN DETAIL

FLOUR AND FEED MILLS; CEREAL

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
480	50,000	300	77,500	no	no	152	507	90	.....	6	.....
481	13,000	160	6,750	.....	10	10	247	2,315	220	2	.....
482	30,000	313	70,000	.....	20	215	340	500	55	5	.....
483	20,000	200	50,000	yes	.....	237	476	.....	.....	6	.....
484	.....	300	410,673	no	no	.....	.....	4,476	.....	11	2
485	68,000	300	81,000	25	.....	497	773	26,000	.....	7	.....
486	5,000	300	.....	.....	9	35	137	375	.....	2	.....
487	80,000	305	200,000	no	no	350	700	.....	3,500	7	.....
488	90,000	300	233,182	35	.....	369	1,720	.....	9,804	16	.....
489	35,000	305	.....	.....	yes	400	250	.....	.....	7	.....
490	60,000	300	171,000	10	.....	300	600	1,000	2,000	11	1
491	16,000	300	20,000	no	no	160	150	200	.....	4	1
492	25,000	300	135,163	8	.....	315	393	500	.....	8	1
493	75,000	225	220,000	20	.....	500	875	750	2,500	12	1
494	60,000	300	186,335	.....	4	422	720	3,748	1,226	19	.....
495	13,000	300	30,000	.....	15	110	810	300	350	4	.....
496	60,000	300	190,000	8	.....	350	217	.....	.....	11	.....
497	7,000	312	.....	no	no	28	70	.....	.....	.....	.....
498	150,000	300	300,000	no	no	1,200	.....	2,000	.....	21	.....
499	60,000	300	300,000	.....	5	260	400	.....	.....	7	1
500	50,000	305	110,000	.....	.....	230	1,020	.....	5,000	15	.....
501	25,000	305	35,000	no	no	200	450	.....	250	5	.....
502	100,000	275	544,767	.....	.....	466	2,725	2,500	4,634	30	.....
503	100,000	312	100,000	.....		350	350	.....	.....	30	.....
504	167,316	305	200,000	yes	.....	680	1,000	30,000	.....	50	6
505	100,000	300	1,000,000	no	no	450	2,000	.....	.....	26	2
506	75,000	300	168,000	75	.....	166	384	12,000	.....	23	15
507	1,306,000	300	4,936,339	28	.....	157	9,176	30,758	179,331	225	215
508	60,000	300	200,000	no	no	206	1,450	3,000	.....	17	.....
509	10,000	....	.....	no	no	110	100	800	.....	5	.....
510	325,000	200	800,000	10	.....	1,400	.....	5,000	.....	42	2

BAKERS, BREAD AND BISCUIT, AND

511	40,000	305	125,000	2	.....	183	262	1,000	.....	26	2
512	50,000	300	75,000	5	.....	88	315	149	10,000	25	35
513	500,000	300	700,000	.....	.....	3,400	1,800	30,000	.....	150	200
514	75,000	280	132,000	22	.....	394	232	.....	.....	20	18
515	85,000	300	1,000,000	10	.....	3,426	4,733	20,000	2,500	225	225
516	18,000	175	40,000	25	.....	200	350	.....	.....	12	8
517	159,366	305	536,900	3½	.....	957	829	35,000	.....	136	27
518	60,000	300	77,041	35	.....	388	207	.....	.....	14	22
519	.....	305	350,000	yes	.....	1,700	.....	.....	.....	120	.....

FROM MANUFACTURERS.

FOOD FACTORIES.—TABLE NO. 22.—Continued.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c			$	%	%	%	%	
2,988	.....	12 00	10 80	.....	.....	....	....	.....	no	no	.....	.....	480
918	.....	12 00	9 00	.....	.....	....	....	.....	no	no	.....	.....	481
2,000	.....	13 00	9 00	.....	.....	1	....	.....	no	no	.....	.....	482
3,000	.....	15 00	9 00	.....	.....	....	....	.....	.....	....	.....	.....	483
5,720	500	10 00	average	4 50	aver.	4	....	2,936	.....	....	.....	.....	484
4,100	.....	14 40	9 60	.....	.....	2	....	1,200	no	no	.....	.....	485
600	.....	6 00	average	.....	.....	....	....	.....	no	no	.....	.....	486
4,000	.....	17 00	10 00	.....	.....	....	2	1,000	no	no	.....	.....	487
8,176	.....	7 50	4 50	.....	.....	2	....	2,500	no	no	.....	.....	488
3,500	.....	12 00	9 00	.....	.....	....	....	.....	no	no	.....	.....	489
6,000	500	19 20	9 60	10 00	.....	....	....	.....	10	....	10	10	490
2,000	250	12 75	9 00	5 00	.....	....	1	2,160	no	no	.....	.....	491
4,300	364	12 00	9 00	7 00	.....	2	....	2,500	yes	....	yes	.....	492
6,500	600	18 00	9 00	12 00	.....	2	1	3,600	no	no	.....	.....	493
5,569	.....	13 50	10 50	.....	.....	3	....	3,000	5	....	5	.....	494
1,600	.....	10 40	7 00	.....	.....	....	....	.....	10	....	10	.....	495
6,136	.....	11 85	9 60	.....	.....	4	....	3,484	no	no	.....	.....	496
.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	497
8,000	.....	9 00	average	.....	.....	1	2	4,000	20	....	.....	.....	498
3,800	450	13 50	9 00	9 00	.....	1	1	1,800	5	....	skilled	.....	499
7,000	.....	12 00	7 70	.....	.....	1	....	700	no	no	.....	.....	500
2,500	.....	13 75	9 00	.....	.....	....	....	.....	no	no	.....	.....	501
14,958	.....	14 25	9 00	.....	.....	5	....	6,900	no	no	.....	.....	502
12,000	.....	7 70	average	.....	.....	....	....	.....	6	....	.....	.....	503
19,000	both	18 00	10 00	.....	.....	4	....	.....	yes	....	.....	.....	504
15,000	450	12 00	9 00	9 00	.....	....	....	.....	.....	....	.....	.....	505
10,000	both	10 80	average	7 00	aver.	2	1	6,000	10	....	.....	.....	506
94,941	30,308	14 00	8 55	7 80	5 00	29	6	35,876	yes	....	unskill.	.....	507
8,000	.....	12 00	9 00	.....	.....	1	....	800	no	no	.....	.....	508
2,000	.....	15 00	12 00	.....	.....	....	....	.....	.....	....	.....	.....	509
25,000	.....	13 50	9 60	6 00	.....	4	2	6,000	10	....	unskill.	.....	510

CONFECTIONERS.—TABLE NO. 23.

16,816	764	13 00	11 00	9 50	5 00	4	2	2,574	no	no	.....	.....	511
9,680	7,600	12 50	6 50	6 00	3 50	4	1	4,120	6	....	6	.....	512
90,000	60,000	13 00	6 00	9 00	3 50	4	12	10,000	.....	....	.....	.....	513
10,858	4,200	12 00	6 00	9 00	4 50	6	2	9,900	.....	....	.....	.....	514
137,261	both	13 50	9 00	8 00	4 50	14	12	18,366	5	....	5	5	515
5,500	1,250	15 25	.....	5 20	.....	....	....	.....	yes	....	.....	.....	516
74,308	6,760	10 70	average	5 00	aver.	3	12	7,332	.....	....	.....	.....	517
12,021	both	16 00	12 00	.....	6 00	1	....	3,601	no	no	.....	.....	518
.....	.....	14 00	10 00	.....	.....	6	7	.....	yes	....	.....	.....	519

RETURNS IN DETAIL

CANNING, PORK PACKING AND BACON CURING

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
520	125,000	313	90,000	10	.....	250	950	1,500	5,000	50	100
521	70,000	120	46,175	22	.....	87	522	.....	3,906	30	45
522	366,237	313	128,600	33	.....	502	3,930	.....	53,135	100	.....
523	150,000	300	776,121	.....	15	530	2,800	.....	35,446	48	.....
524	600,000	300	4,000,000	no	no	1,759	3,000	140,000	40,000	140	.....
525	40,000	200	25,000	.....	10	170	252	100	.....	53	44
526	.....	310	1,165,000	no	no	1,500	3,000	.....	.....	75	.....
527	80,000	125	50,000	.....	20	195	1,269	500	150	25	30
528	.....	305	.....	10	.....	.....	.....	.....	.....	.....	.....
529	403,764	282	668,946	12	.....	521	3,724	2,642	634,205	218	107
530	.....	150	150,000	20	.....	40	.....	2,000	.....	60	100
531	150,000	150	135,000	no	no	225	.....	.....	.....	100	100
532	500,000	300	1,092,944	.....	yes	240	8,182	.....	73,758	130	.....
533	.....	150	125,000	no	no	.....	.....	2,000	.....	45	125
534	.....	65	.....	10	.....	.....	.....	.....	.....	20	40
535	131,734	300	210,000	25	.....	122	697	24,000	172,550	50	20
536	197,111	200	138,176	6	.....	364	1,825	.....	79,663	30	45

DAIRY PRODUCTS AND OTHER

537	6,000	280	51,133	no	no	43	117	200	.....	4	.....
538	12,000	300	32,000	no	no	110	150	300	.....	4	.....
539	30,000	305	100,000	10	.....	606	913	150	2,000	10	10
540	10,000	40	4,000	no	no	85	175	.....	.....	7	.....
541	1,225,000	300	2,500,000	25	.....	900	5,500	25,000	.....	600	7
542	3,000	200	12,408	8	.....	8	18	50	.....	4	.....
543	150,000	306	617,000	15	.....	2,831	2,469	2,640	36,725	43	56
544	250,000	300	409,250	.....	19	59	746	3,560	356,033	72	44
545	9,000	300	26,000	no	no	60	120	.....	.....	3	4
546	50,000	300	75,000	25	.....	500	475	10,000	.....	12	25
547	.....	300	80,000	.....	.....	.....	225	7,303	.....	4	8
548	27,360	300	21,000	10	.....	134	125	.....	.....	15	.....
549	30,240	225	28,729	1	.....	.....	97	.....	.....	4	1
550	2,500	365	10,000	no	no	46	73	450	.....	4	1
551	140,000	300	122,227	.....	.....	762	1,649	.....	26,000	12	9
552	167,700	210	300,000	10	.....	1,009	1,491	.....	.....	40	190
553	60,000	305	170,000	20	.....	800	400	2,000	.....	20	10
554	27,221	305	28,903	23	.....	46	307	.....	11,681	2	2

DISTILLERIES, BREWERIES AND WINE FACTORIES;

555	150,000	300	116,760	20	.....	623	1,067	1,500	816	14	.....
556	120,000	300	54,990	no	no	266	1,675	.....	.....	15	.....
557	119,890	305	25,500	100	.....	100	596	600	6,000	6	.....
558	9,000	300	16,000	10	.....	150	180	150	.....	2	.....
559	75,000	300	100,000	no	no	16,341	338	.....	12,284	65	35
560	25,000	305	75,000	2	.....	400	.....	500	.....	15	.....
561	52,144	305	32,334	.....	6	307	243	.....	2,012	8	4
562	30,000	90	3,000	.....	.....	236	58	.....	.....	4	4
563	75,000	305	60,000	no	no	400	600	.....	15,000	12	1
564	281,481	300	414,830	6½	.....	61,905	3,108	879	5,471	180	70

FROM MANUFACTURERS.

WORKS, ABATTOIRS, ETC.—TABLE No. 24.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
15,000	10,000	15 00	9 00	6 00	4 50	5	....	5,200	5	....	5	.....	520
4,013	1,210	12 00	7 50	6 00	3 60	2	....	1,800	no	no	.....	.....	521
39,924	.....	15 00	10 00	.....	.....	10	1	15,000	no	no	.....	.....	522
28,329	.....	13 50	10 00	.....	.....	3	4	5,504	no	no	.....	.....	523
102,000	.....	21 00	10 00	.....	.....	15	6	32,000	5	....	5	10	524
1,937	1,086	15 00	9 00	7 50	4 80	5	2	2,208	no	no	.....	.....	525
43,000	.....	12 50	7 70	.....	.....	7	....	10,600	no	no	.....	.....	526
5,500	2,500	10 50	8 25	.....	4 50	2	1	2,800	no	no	.....	.....	527
.....	.....	.....	.....	.....	.....	....	....	.....	yes	....	.....	.....	528
42,065	20,719	13 50	8 70	8 25	5 40	8	2	10,321	10	....	10	10	529
14,000	.....	15 50	9 00	7 50	5 40	3	....	3,000	15	....	15	.....	530
15,000	both	12 00	9 00	6 00	4 50	2	1	2,600	.....	....	.....	.....	531
53,356	.....	12 00	9 00	.....	.....	13	2	20,700	no	no	.....	.....	532
4,000	both	12 75	8 25	7 50	5 40	3	....	2,800	7½	....	7½	.....	533
.....	.....	9 75	6 75	6 00	4 50	1	1	.....	.....	.....	.....	.....	534
9,354	both	12 00	9 00	6 00	4 80	5	1	3,800	10	....	10	5	535
9,000	5,470	12 00	9 00	4 80	4 20	3	1	3,738	no	no	.....	.....	536

FOODS.—TABLE No. 25.

500	.....	15 30	3 83	.....	.....	1	....	331	no	no	.....	.....	537
1,400	.....	12 00	2 00	.....	.....	....	....	.....	.....	....	.....	.....	538
4,200	2,200	15 00	8 25	5 00	3 50	2	2	4,060	no	no	.....	.....	539
1,000	.....	10 00	.....	.....	.....	.....	.....	.....	no	no	.....	.....	540
100,000	1,500	15 00	10 35	.....	3 00	11	2	22,000	5	....	5	5	541
900	.....	18 18	14 50	.....	.....	1	....	.....	no	no	.....	.....	542
18,059	10,000	14 00	10 00	6 00	3 00	9	1	22,168	5	....	5	5	543
32,979	15,425	15 12	10 56	6 72	.....	3	1	4,007	no	no	.....	.....	544
1,300	1,200	8 67	average	6 00	aver.	2	1	2,000	.....	....	.....	.....	545
5,000	3,000	18 00	12 00	.....	2 40	....	2	1,500	10	....	10	10	546
2,764	1,689	14 00	average	6 00	aver.	....	....	.....	.....	....	.....	.....	547
4,540	.....	10 50	9 00	.....	.....	1	....	900	no	no	.....	.....	548
1,160	480	14 20	6 00	12 00	.....	3	1	1,633	yes	....	skilled	.....	549
1,200	156	16 00	11 00	.....	3 00	....	....	.....	no	no	.....	.....	550
8,500	3,200	14 16	average	7 11	aver.	13	2	17,027	.....	....	.....	.....	551
23,934	both	12 00	average	7 50	aver.	18	2	20,000	10	....	10	10	552
12,000	4,000	11 75	average	7 85	aver.	7	1	10,000	10	....	10	10	553
1,048	400	9 00	8 00	6 00	5 00	1	2	1,681	no	no	.....	.....	554

CIGAR AND TOBACCO FACTORIES.—TABLE No. 26.

8,309	.....	.....	10 50	.....	.....	3	....	3,720	no	no	.....	.....	555
8,232	.....	15 50	8 20	.....	.....	2	1	3,765	yes	....	yes	.....	556
5,000	.....	16 34	average	.....	.....	....	....	.....	no	no	.....	.....	557
1,092	.....	12 00	9 00	.....	.....	1	....	1,200	10	....	.....	.....	558
20,039	both	4 00	average	for	all	....	....	.....	no	no	.....	.....	559
8,200	.....	15 00	10 50	.....	.....	....	....	.....	no	no	.....	.....	560
3,615	both	.....	9 00	.....	5 00	2	1	2,215	10	....	male	.....	561
700	60	.....	6 20	.....	3 00	....	....	.....	.....	....	.....	.....	562
6,000	300	10 00	average	6 00	.....	....	....	.....	no	no	.....	.....	563
112,438	both	9 00	average	for	all	9	1	17,000	no	no	.....	.....	564

RETURNS IN DETAIL

DISTILLERIES, BREWERIES AND WINE FACTORIES

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
565	500,000	260	1,200,614	14½	.....	4,290	4,600	4,118	902,761	106	81
566	40,000	300	90,000	.....	.....	135	120	.....	.....	40	20
567	90,000	305	20,000	yes	.....	52	.....	.....	4,000	4	.....
568	9,000	335	33,000	10	.....	111	60	.....	.....	8	.....
569	5,000	300	5,500	no	no	8	35	.....	.....	5	.....
570	500,000	300	681,257	27	.....	181	2,633	380	167,761	235	63
571	20,000	305	26,300	no	no	131	180	.....	.....	6	.....
572	1,600,000	313	519,000	.....	12	19,541	25,445	50,000	.....	173	.....
573	92,000	306	64,000	.....	10	405	910	500	.....	13	.....
574	30,000	90	8,000	50	.....	20,000	130	.....	700	3	.....
575	40,000	300	69,000	2	.....	128	120	.....	.....	12	23
576	170,000	300	110,000	.....	10	488	.....	.....	.....	20	60
577	468,000	300	370,770	.....	.....	3,469	2,532	.....	.....	106	.....
578	100,000	315	91,088	.....	10	785	984	.....	.....	25	.....
579	8,000	305	14,500	no	no	25	80	350	.....	8	9

CHEMICAL WORKS, MEDICINES AND

580	3,000	255	7,000	9	.....	18	.....	.....	.....	1	....
581	32,000	300	60,000	30	.....	156	249	1,000	.....	5	15
282	16,000	305	46,000	10	.....	442	380	2,500	.....	9	....
583	136,500	280	262,354	25	.....	650	1,715	1,900	49,609	40	21
584	8,000	305	12,000	no	no	.....	50	.....	.....	2	4
585	48,000	300	36,500	½	.....	824	382	.....	18,600	7	11
586	1,936,667	300	1,000,000	90	.....	6,600	8,000	166,752	55,000	497	....
587	15,000	300	35,500	5	.....	76	110	.....	.....	12	3
588	3,400	280	19,742	21½	.....	26	38	.....	12,633	1	2
589	35,000	300	80,000	10	.....	500	250	300	.....	8	15
590	600,000	300	.....	.....	.....	36	415	.....	.....	100	.....
591	500,000	300	291,807	10	.....	1,070	2,838	14,155	60,365	55	82
592	15,000	313	10,000	.....	.....	76	26	.....	.....	4	1
593	200,000	305	61,999	.....	23	3,525	.....	.....	....	20	...

OIL REFINERIES, PAINT AND VARNISH

594	650,000	300	700,000	10	.....	500	3,500	15,000	6,000	35	.....
595	80,000	305	118,000	16	.....	88	1,047	.....	10,539	26	2
596	220,000	305	285,000	3	.....	.....	.....	.....	.....	15	35
597	90,000	305	98,025	no	no	431	690	529	1,479	5	1
598	56,571	305	119,333	yes	.....	689	.....	.....	.....	12	.....
599	2,390,697	306	.....	.....	19¼	.....	.....	.....	17,608	286	3
600	100,000	300	140,000	20	.....	400	500	3,300	2,200	25	1
601	375,000	300	200,000	yes	.....	700	1,500	15,000	.....	200	.....
602	10,000	300	30,000	5	.....	114	36	.....	200	3	1
603	130,000	310	75,000	5	.....	441	933	1,400	.....	70	.....
604	14,500	305	14,500	no	no	180	64	.....	.....	4	1
605	11,000	300	45,000	no	no	204	310	557	4,000	6	.....
606	140,000	300	280,000	10	.....	244	2,600	3,500	.....	45	.....

FROM MANUFACTURERS.

CIGAR AND TOBACCO FACTORIES.—TABLE No. 26.—Continued.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
55,502	20,318	12 23	average	5 83	aver.	9	1	28,775	10	....	.....	10	565
24,000	7,000	12 00	.....	7 00	.....	1	1	1,750	no	no	.....	.....	566
2,000	.....	10 00	average	.....	.....	2	....	1,500	no	no	.....	.....	567
4,200	.....	12 00	9 90	.....	.....	2	....	3,000	8	....	8	.....	568
2,000	.....	8 00	average	.....	.....	.....	.....	.....	no	no	.....	.....	569
124,291	19,000	13 00	7 00	13 00	6 00	11	....	38,433	5	....	5	5	570
3,000	.....	18 70	.....	.....	.....	1	....	780	.....	....	.....	.....	571
94,181	.....	10 50	average	.....	.....	16	....	22,546	no	no	.....	.....	572
9,500	.....	23 00	11 00	.....	.....	3	....	3,920	no	no	.....	.....	573
800	.....	11 50	.....	.....	.....	.....	.....	.....	no	no	.....	.....	574
7,000	9,300	12 00	5 00	3 50	2 00	14	24	19,300	yes	....	.....	.....	575
10,000	25,000	10 00	average	8 33	aver.	.....	.....	.....	no	no	.....	.....	576
19,189	.....	12 85	8 49	.....	.....	22	3	25,000	1	....	1	.....	577
18,575	.....	18 10	12 00	.....	.....	4	....	4,100	5	....	5	5	578
2,600	1,600	10 00	4 50	5 00	3 50	....	....	.....	no	no	.....	.....	579

PERFUMERIES.—TABLE No. 27.

381	...	.....	9 00	.....	.....	.....	.....	.....	no	no	.....	.....	580
1,612	4,680	15 00	7 50	7 00	4 00	2	2	2,860	no	no	.....	.....	581
3,623	....	8 00	average	.....	.....	1	0	1,200	10	....	10	....	582
17,172	5,880	9 14	average	6 00	aver.	4	2	7,860	no	no	.....	.....	583
2,000	1,000	15 00	.....	12 00	.....	.....	.....	.....	no	no	.....	.....	584
5,200	1,800	14 80	average	.....	4 50	8	3	6,900	10	....	10	10	585
258,725	.....	15 00	9 90	.....	.....	26	5	45,000	3	....	3	3	586
11,000	1,000	10 00	average	6 00	aver.	1	2	.....	.....	....	.....	.....	587
1,040	480	20 00	.....	.....	5 00	.....	.....	.....	no	no	.....	.....	588
2,500	3,000	6 25	average	.....	4 00	....	2	600	no	no	.....	.....	589
.....	.....	18 00	12 00	.....	.....	7	....	.....	.....	....	.....	.....	590
32,547	17,589	18 50	7 00	6 50	3 50	6	1	4,264	13	....	13	13	591
3,000	300	15 00	.....	6 00	.....	2	....	.....	.....	....	.....	.....	592
13,270	.....	13 00	average	.....	.....	4	....	5,740	no	no	.....	.....	593

FACTORIES.—TABLE No. 28.

17,000	.....	12 00	9 00	.....	.....	4	1	6,500	no	no	.....	.....	594
3,712	530	12 00	9 10	.....	5 10	1	2	7,874	10	....	10	20	595
8,000	13,000	10 46	average	7 28	aver.	20	8	25,000	5	....	.....	.....	596
2,349	260	9 03	.....	.....	5 00	1	....	1,500	no	no	.....	.....	597
8,178	.....	12 50	.....	.....	.....	3	....	4,300	no	no	.....	.....	598
.....	.....	14 16	9 90	7 26	.....	34	4	.....	no	no	.....	.....	599
18,000	624	24 00	10 50	12 00	.....	3	1	9,500	10	....	10	10	600
75,000	.....	12 00	9 00	.....	.....	2	....	3,000	yes	....	yes	yes	601
1,850	250	16 00	10 00	.....	5 00	1	1	1,060	no	no	.....	.....	602
36,484	.....	10 00	average	.....	.....	5	....	.....	9	....	9	.....	603
2,200	.....	8 75	.....	.....	.....	.....	.....	.....	yes	....	.....	.....	604
4,760	.....	35 00	11 33	.....	.....	2	1	3,632	no	no	.....	.....	605
16,500	.....	7 33	average	.....	.....	8	6	9,500	10	....	10	10	606

RETURNS IN DETAIL

Gas Works, Electric Light.

Office No.	Capital employed including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
607	28,000	365	11,610	.....	17	250	125	.....	5,373	2	.....
608	68,000	365	10,000	10	.....	156	98	38,000	1,000	4	1
609	25,000	365	5,200	no	no	200	90	1,000	1,600	4	.....
610	263,300	365	30,000	10	.....	1,950	375	805	.....	6	1
611	25,000	365	5,000	2	.....	125	55	.....	.....	2	.....
612	145,000	365	15,000	no	no	1,446	154	6,000	.....	8	1
613	60,000	365	11,000	8	.....	331	90	1,500	1,225	4	.....
614	30,000	365	7,500	6	.....	150	66	.....	900	3	.....
615	49,000	365	11,000	yes	.....	875	125	7,500	.....	8	.....
616	14,965	365	2,779	yes	.....	63	28	.....	.....	3	.....
617	13,800	365	3,636	no	no	.....	.....	350	2,138	1	.....
618	52,795	365	.....	.....	.....	.....	190	1,198	3,069	3	.....
619	67,580	365	11,513	5	.....	.....	46	1,202	1,232	4	.....
620	6,512,517	365	1,735,983	10	.....	65,296	14,576	610,382	.....	650	14
621	20,000	365	5,481	.....	10	54	.....	1,900	375	1	.....
622	220,000	365	60,000	9	.....	1,200	750	60,000	20,300	25	1
623	2,390,205	365	382,860	11	.....	14,573	3,841	279,642	.....	85	.....
624	20,000	365	4,000	no	no	35	300	100	500	2	.....
625	153,849	365	26,716	1	.....	.....	355	11,125	14,472	8	.....
626	20,000	365	4,327	5	.....	56	148	176	.....	1	.....
627	225,000	365	112,000	7	.....	1,575	292	14,000	.....	10	.....
628	110,000	365	14,000	.....	.....	467	.....	2,500	500	5	.....
629	65,000	365	7,500	10	.....	200	100	1,000	100	4	.....
630	866,482	365	175,000	4	.....	4,466	1,717	61,813	53,186	110	.....
631	150,000	365	53,444	10	.....	772	839	3,933	22,474	15	.....

Printing, Publishing and

632	100,000	305	75,000	15	.....	275	520	20,400	400	43	22
633	41,000	305	24,500	10	.....	154	185	15,900	1,960	13	3
634	6,100	305	4,000	15	.....	10	56	.....	.....	5	.....
635	315,000	305	144,000	42	.....	372	720	750	25,000	50	30
636	3,500	310	3,750	6½	.....	19	26	.....	.....	3	1
637	7,000	300	4,000	yes	.....	45	63	1,200	.....	6	2
638	174,000	305	200,000	7	.....	2,000	830	10,000	13,000	69	3
639	224,190	300	157,646	2½	.....	624	1,618	2,434	4,587	58	20
640	152,400	305	.....	.....	.....	172	422	.....	.....	.....	.....
641	3,500	312	4,000	no	no	10	21	100	.....	3	1
642	15,000	305	18,000	20	.....	.....	.....	.....	.....	2	3
643	60,000	305	55,000	10	.....	230	288	.....	.....	40	10
644	5,000	305	4,000	.....	.....	23	48	75	50	3	.....
645	25,000	300	40,000	no	no	120	400	.....	.....	25	2
646	14,000	306	19,495	10	.....	64	198	1,377	1,470	10	.....
647	100,000	312	57,466	19¼	.....	249	165	637	16,974	50	35
648	200,000	305	203,000	no	no	2,600	860	.....	16,000	110	35
649	25,000	304	5,930	30	.....	32	62	200	.....	4	2
650	2,500	300	1,800	5	.....	20	43	175	100	2	2

FROM MANUFACTURERS.

HEATING AND POWER WORKS.—TABLE No. 29.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c.	$ c.	$ c.			$	%	%	%	%	
1,722	.....	15 42	12 00	.....	.....	2	....	2,000	no	no	.....	.....	607
3,304	312	53 30	9 00	6 11	.....	4	1	3,628	no	no	.....	.....	608
1,800	.....	9 00	average	.....	.,..	1	....	360	6	....	unskill	.....	609
3,600	600	11 32	average	11 32	.....	1	1	.....	.....	.....	.....	.....	610
780	.....	11 32	3 40	.....	.....	1	1	780	no	no	.....	.....	611
4,020	240	9 50	average	.....	4 50	1	1	.....	10	....	skilled	.....	612
2,354	.....	19 00	7 70	.....	.....	1	....	180	no	no	.....	.....	613
975	.....	10 50	7 00	.....	.....	1	....	180	.....	2	skilled	.....	614
4,680	.....	21 00	11 37	.....	.....	1	1	1,500	15	....	15	.....	615
910	.....	11 15	average	.....	.....	1	....	320	9	....	9	.....	616
840	.....	16 00	.....	.....	.....	1	....	100	no	no	.....	.....	617
1,976	.....	15 70	10 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	618
2,222	.....	10 80	average	.....	.....	1	....	225	5	....	5	.....	619
418,126	both	12 14	average	for	all	40	10	.....	yes	....	yes	yes	620
300	.....	.....	5 70	.....	.....	1	....	500	no	no	.....	.....	621
18,000	360	22 75	12 25	7 00	.....	4	1	7,200	5	....	.....	5	622
57,801	.....	14 00	12 20	.....	.....	50	4	35,878	5	....	.....	.....	623
1,000	.....	14 15	4 72	.....	.....	2	....	200	no	no	.....	.....	624
4,591	.....	15 00	11 32	.....	.....	3	....	1,875	yes	....	.....	yes	625
800	.....	15 10	.....	.....	.....	1	....	125	.....	....	.....	.....	626
6,255	.....	30 00	23 00	.....	.....	4	1	4,230	yes	....	yes	yes	627
2,928	.....	17 30	10 20	.....	.....	1	....	275	.....	....	.....	.....	628
2,200	.....	10 60	average	.....	.....	1	....	800	no	no	.....	.....	629
53,351	.....	30 30	21 50	.....	.....	10	1	8,305	10	....	.....	10	630
6,369	.....	17 50	average	.....	.....	9	....	6,340	no	no	.....	.....	631

ALLIED TRADES.—TABLE No. 30.

11,646	4,400	15 50	8 00	7 00	3 50	6	2	10,200	5	....	5	.....	632
7,158	944	15 17	7 12	6 50	3 25	4	....	3,927	12	....	12	.....	633
2,400	.....	12 00	7 00	.....	.....	2	....	1,200	10	....	skilled	.....	634
31,200	8,400	16 00	7 00	7 50	4 75	9	6	7,900	20	....	.....	.....	635
1,560	375	11 00	.....	7 50	.....	2	....	1,550	5	....	.....	.....	636
2,236	364	9 00	average	6 00	.....	1	1	416	10	....	skilled	.....	637
42,489	1,144	12 00	average	7 50	aver.	35	8	22,824	yes	....	yes	yes	638
31,346	4,853	16 50	7 50	7 50	4 00	3	6	8,788	yes	....	yes	yes	639
.....	.....	.....	.....	.....	.....	8	3	13,988	no	no	.....	.....	640
1,800	400	12 00	.....	8 00	.....	.....	.....	.....	.....	....	.....	.....	641
4,000	1,500	20 00	.....	10 00	.....	.....	.....	.....	yes	....	yes	yes	642
22,000	2,100	12 50	3 00	.....	3 00	10	2	5,900	10	....	10	10	643
1,032	.....	8 00	4 00	.....	.....	.....	.....	.....	no	no	.....	.....	644
14,250	500	20 00	5 00	6 00	.....	4	1	7,000	no	no	.....	.....	645
6,988	.....	16 00	5 50	.....	.....	1	1	1,560	3⅓	....	3⅓	3⅓	646
19,153	7,146	27 50	8 00	11 00	5 50	15	10	8,000	.....	.....	.....	.....	647
55,200	10,000	18 50	8 00	10 00	4 50	10	7	16,300	no	no	.....	.....	648
2,506	664	14 70	4 80	7 00	6 00	.....	.....	.....	no	no	.....	.....	649
856	338	13 50	3 00	.....	3 25	....	....	.....	10	....	10	10	650

RETURNS IN DETAIL

BRICK AND TILE YARDS, POTTERIES, PORTLAND

Office No.	Capital employed, including plant.	No. of days in operation during 1909.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.	
				Increased.	Decreased.					Male.	Female.
	$		$	%	%	$	$	$	$		
651	1,000,000	54	60,021	.....	33⅓	550	890	.....	.....	100	.....
652	351,910	85	27,204	.....	71	370	893	.....	.....	22	.....
653	10,000	305	.....	.....	.....	254	.....	.....	.....	3	20
654	30,000	300	2,500	10	.....	250	.....	.....	.....	18	.....
655	80,000	300	36,000	33⅓	.....	130	430	200	700	20	.....
656	500,000	203	75,000	yes	.....	.....	.....	.....	.....	65	.....
657	91,892	288	83,297	56	.....	75	804	7,037	.....	100	.....
658	85,000	305	48,718	10	.....	200	60	1,800	.....	28	.....
659	10,000	300	10,000	yes	.....	91	90	200	.....	8	.....
660	10,000	300	10,000	20	.....	300	200	300	5,000	9	.....
661	15,000	300	14,000	8	.....	100	220	.....	6,000	5	.....
662	57,500	312	137,720	.....	.....	.....	595	23,023	16,732	145	.....
663	30,000	110	17,000	no	no	240	170	.....	.....	20	.....
664	40,000	215	15,500	yes	.....	63	558	.....	2,253	20	.....
665	17,000	175	13,296	.....	yes	26	34	.....	.....	16	.....
666	56,100	300	31,208	no	no	167	570	.....	2,100	20	.....
667	50,000	300	60,000	100	.....	108	300	6,000	2,000	36	.....
668	33,933	300	44,641	144	.....	251	522	3,266	20,013	.....	.....
669	20,000	200	13,530	no	no	28	31	3,000	1,000	30	.....
670	3,827,222	364	7,558,624	17	.....	32,537	14,525	68,558	.....	1,243	.....
671	75,409	305	48,710	27	.....	160	68	2,000	.....	28	.....
672	.....	160	2,600	25	.....	16	.....	.....	.....	3	.....

MISCELLANEOUS

673	6,500	300	9,178	no	no	115	70	3,500	1,792	6	.....
674	12,883	300	.....	.....	.....	377	257	.....	.....	17	1
675	30,000	313	72,000	40	.....	173	191	150	.....	20	.....
676	5,000	305	50,000	10	.....	185	.....	.....	.....	35	.....
677	50,000	310	100,000	20	.....	300	200	300	.....	30	20
678	15,000	305	40,000	no	no	118	219	.....	.....	6	.....
679	25,000	300	64,000	7	.....	250	200	....	.....	6	20

FROM MANUFACTURERS.

CEMENT WORKS.—TABLE NO. 31.

Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.		Office No.
		Male.		Female.									
Male.	Female.	Skilled.	Unskilled.	Skilled.	Unskilled.	Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.	
$	$	$ c.	$ c	$ c.	$ c.			$	%	%	%	%	
15,467	.....	18 00	9 00	.....	.....	10	....	7,676	no	no	.....	.....	651
11,335	.....	18 00	9 00	.....	.....	4	....	2,317	5	....	5	.....	652
1,100	3,000	12 00	4 50	.....	3 00	1	....	.....	no	no	.....	.....	653
9,100	.....	23 40	12 00	.....	.....	1	....	2,000	no	no	.....	.....	654
8,500	.....	10 50	9 00	.....	.....	4	1	3,600	.....	....	.....	.....	655
22,000	.....	20 00	9 00	.....	.....	4	1	5,000	.....	....	.....	.....	656
56,511	.....	17 25	9 75	.....	.....	4	....	6,078	15	....	15	15	657
14,673	.....	10 27	average	.....	.....	1	....	1,229	5	....	.....	.....	658
3,385	.....	15 00	9 00	.....	.....	....	....	.....	no	no	.....	.....	659
5,000	.....	12 00	6 00	.....	.....	....	....	.....	5	....	5	.....	660
3,200	.....	12 80	average	.....	.....	3	2	2,600	no	no	.....	.....	661
78,989	.....	12 75	9 60	.....	.....	8	1	11,040	8	....	7	10	662
6,000	.....	18 00	.....	.....	.....	....	....	.....	no	no	.....	.....	663
7,513	.....	10 43	average	.....	.....	2	....	2,000	no	no	.....	.....	664
4,752	.....	12 00	9 90	.....	.....	1	....	1,000	no	no	.....	.....	665
6,818	.....	15 00	7 50	.....	.....	2	1	4,000	.....	....	.....	.....	666
22,664	.....	12 60	average	.....	.....	....	....	.....	yes	....	.....	.....	667
.....	.....	.....	.....	.....	.....	2	1	2,097	no	no	.....	.....	668
7,774	.....	10 50	9 00	.....	.....	....	....	.....	.....	....	.....	.....	669
840,690	.....	21 90	10 95	.....	.....	93	12	128,463	11	....	skilled	11	670
15,467	.....	12 00	10 00	.....	.....	2	....	1,379	9	....	9	.....	671
630	.....	.....	9 00	.....	.....	....	....	.....	.....	....	.....	.....	672

MANUFACTURES.—TABLE NO. 32.

3,250	.....	15 00	.....	.....	.....	3	....	2,475	10	....	10	.....	673
10,207	520	12 00	.....	10 00	.....	....	....	.....	.....	....	.....	.....	674
12,000	.....	25 20	12 60	.....	.....	7	1	7,500	20	....	.....	20	675
15,000	.....	12 00	....	.....	.....	....	....	.....	10	....	.....	.....	676
16,000	7,000	14 25	9 75	6 50	3 75	1	3	1,500	5	....	.....	... .	677
4,040	.....	24 00	12 00	.....	.....	....	....	.....	no	no	.....	.....	678
3,000	5,000	15 00	6 00	6 00	3 00	2	2	2,000	no	no	.....	. ..	679

WAGES AND THEIR PROPORTION TO PRODUCT.

As 37 of the establishments included in the previous tables omit necessary details there are only 642 given in the following tables which show the annual and daily wages paid in the various industries and the proportion they bear to the amount of the gross product. In the average percentage of wages to product there has been a slight decrease, being 26.66 per cent., as compared with 28.25 per cent. in 1908, but it is still larger than in and preceding year.

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.

LUMBER MANUFACTURERS.—TABLE No. 1.

Schedule No.	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
1	107	150	22,000	70,000	205 61	1 37	31	69	1
2	20	150	5,000	15,000	250 00	1 67	33	67	2
3	34	300	17,000	80,000	500 00	1 67	21	79	3
4	107	170	36,000	100,000	336 00	1 98	36	64	4
5	23	270	7,200	35,000	313 04	1 16	21	79	5
6	509	160	107,500	400,000	211 20	1 32	27	73	6
7	56	300	29,563	118,296	211 24	70	25	75	7
9	42	150	6,000	30,000	142 86	95	20	80	9
10	290	135	53,500	175,000	184 48	1 37	31	69	10
11	103	182	26,000	275,000	349 51	1 92	13	87	11
12	224	180	51,000	400,000	178 57	99	13	87	12
14	9	300	2,200	25,000	244 44	82	9	91	14
15	64	300	32,009	202,683	500 00	1 66	15	85	15
16	103	160	28,000	50,000	271 84	1 70	56	44	16
17	60	300	34,400	110,000	573 33	1 91	31	69	17
18	121	145	33,000	210,000	272 22	1 88	16	84	18
19	500	180	260,000	1,000,000	520 00	2 88	26	74	19
20	41	300	21,900	50,000	534 15	1 78	44	56	20
21	565	180	207,500	1,000,000	367 43	2 04	21	79	21
22	153	150	33,500	100,000	218 95	1 46	34	66	22
23	31	75	3,600	14,000	116 01	1 55	26	74	23
24	21	300	10,900	25,000	519 05	1 73	44	56	24
25	122	150	57,025	250,000	467 42	3 12	23	17	25
26	30	240	6,000	22,000	200 00	83	27	73	26
27	264	158	92,515	362,248	350 43	2 22	26	74	27
28	4	275	2,000	3,000	500 00	1 82	67	33	28
29	11	250	8,361	48,000	760 09	3 04	17	83	29
30	573	233	145,496	515,000	257 41	1 10	28	72	30
31	173	298	113,356	500,350	655 24	2 20	23	77	31
32	173	180	42,120	200,000	243 47	1 35	21	79	32
33	113	300	55,000	150,000	486 73	1 62	37	63	33
35	78	175	17,000	120,000	217 95	1 25	14	86	35
36	217	150	70,000	400,000	322 58	2 15	18	82	36
37	70	250	12,000	90,000	171 43	68	13	87	37
40	1,500	170	750,000	1,300,000	500 00	2 94	50	50	40
		Average			Average	Average	Average	Average	
	6,511	210	2,408,645	7,445,577	347 22	1 68	27	73	

PLANING MILLS, SASH AND DOOR FACTORIES, ETC.—TABLE NO. 2.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
41	48	305	22,500	97,000	468 75	1 54	23	77	41
43	57	300	40,000	125,000	701 75	2 34	32	68	43
44	121	300	50,158	450,000	414 53	1 38	11	89	44
45	42	300	26,500	165,000	630 95	3 10	16	84	45
47	49	300	26,000	90,000	530 61	1 77	29	71	47
48	40	300	22,095	85,000	552 38	1 84	26	74	48
50	60	300	18,031	40,000	342 67	1 14	51	49	50
51	14	305	6,200	74,000	442 86	1 45	8	92	51
52	13	300	5,880	40,000	452 31	1 51	15	85	52
53	56	265	37,000	375,000	660 72	2 49	10	90	53
54	26	200	103,000	300,000	500 00	2 50	34	66	54
55	48	310	22,700	158,000	472 92	1 53	14	86	55
56	28	300	12,000	51,000	428 57	1 43	24	76	56
57	32	305	16,200	120,000	506 25	1 66	14	86	57
58	17	300	6,450	30,000	379 41	1 26	22	78	58
59	59	300	20,752	91,028	351 73	1 17	23	77	59
61	53	300	37,552	125,000	708 53	2 36	30	70	61
62	152	300	74,500	235,000	490 07	1 63	32	68	62
65	108	300	49,000	100,000	453 70	1 51	49	51	65
66	5	300	1,500	6,000	300 00	1 00	25	75	66
67	64	250	23,800	125,000	371 87	1 49	19	81	67
68	4	300	1,976	37,159	494 00	1 65	5	95	68
69	53	300	20,000	75,000	377 36	1 26	27	73	69
70	10	304	4,717	30,153	471 70	1 55	16	84	70
71	27	305	12,500	22,000	462 96	1 52	57	43	71
72	69	300	35,700	110,000	517 39	1 72	32	68	72
73	47	290	28,058	65,400	596 98	2 05	43	57	73
74	34	300	20,700	85,000	608 82	2 03	24	76	74
	Average 1,336	Average 294	745,469	3,306,740	Average 488 92	Average 1 75	Average 25	Average 75	

WOODWORKING FACTORIES, SPECIALTIES IN WOODENWARE.—TABLE NO. 3.

75	90	300	43,000	160,000	477 78	1 59	27	73	75
76	205	305	60,700	150,000	296 10	97	41	59	76
77	4	300	1,976	7,500	494 00	1 65	26	74	77
78	108	305	46,900	108,000	434 26	1 42	43	57	78
80	8	230	2,400	10,500	300 00	1 30	23	77	80
81	27	300	10,682	26,356	395 63	1 32	41	59	81
82	37	300	13,200	60,000	356 76	1 19	22	78	82
83	47	310	20,041	52,622	426 42	1 37	38	62	83
84	31	300	14,061	51,877	453 58	1 51	41	59	84
85	10	310	6,000	10,000	600 00	1 94	60	40	85
86	131	305	56,260	190,443	429 47	1 41	29	71	86
87	59	305	33,050	90,000	560 17	1 84	37	63	87
88	23	280	13,975	36,295	607 61	2 17	39	61	88
89	31	300	6,280	25,000	202 58	68	25	75	89
90	38	250	16,066	40,650	422 79	1 69	40	60	90
91	38	250	13,500	28,000	355 26	1 42	48	52	91
92	13	300	8,500	18,000	653 85	2 18	47	53	92
93	34	300	18,450	100,000	542 65	1 91	18	82	93
94	56	302	23,563	124,000	420 77	1 39	19	81	94
95	34	292	10,806	28,500	317 82	1 09	39	61	95
96	10	300	4,200	12,000	420 00	1 40	35	65	96
97	22	300	9,000	32,500	409 09	1 36	28	72	97
98	33	300	15,600	75,000	473 03	1 57	21	79	98
99	5	300	2,500	7,000	500 00	1 67	36	64	99
100	5	300	3,672	24,000	734 40	2 45	15	85	100

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

TABLE No. 3—*Continued.*

Schedule No.	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
101	56	265	37,000	375,000	660 72	2 49	10	90	101
102	12	300	6,442	24,171	536 83	1 79	27	73	102
103	38	300	17,000	75,000	447 37	1 49	23	77	103
104	105	300	32,700	130,000	311 43	1 04	25	75	104
105	39	290	19,200	55,000	492 31	1 70	35	65	105
106	110	305	40,000	250,000	363 63	1 19	16	84	106
107	64	300	38,210	202,683	526 31	1 75	19	81	107
	1,423	Average 294	644,934	2,580,097	Average 456 96	Average 1 53	Average 31	Average 69	

FURNITURE MANUFACTURERS; BANK AND OFFICE FITTINGS.—TABLE No. 4.

108	2	275	751	2,879	375 50	1 37	26	74	108
109	44	305	21,371	55,293	485 70	1 59	38	62	109
110	48	305	15,000	120,000	312 50	1 02	13	87	110
111	100	305	62,000	200,000	620 00	2 03	31	69	111
112	86	300	42,110	85,000	489 65	1 63	50	50	112
114	52	305	21,900	65,000	421 15	1 38	34	66	114
115	13	300	6,785	52,000	521 92	1 74	15	85	115
116	84	310	32,000	110,000	380 95	1 23	29	71	116
117	83	300	30,600	80,000	368 68	1 23	38	62	117
118	33	300	18,200	40,000	551 52	1 84	45	55	118
119	48	303	19,000	60,000	395 83	1 31	32	68	119
120	62	300	26,220	50,000	422 90	1 41	52	48	120
121	38	300	19,000	80,000	500 00	1 67	24	76	121
122	302	300	138,000	260,000	403 31	1 34	53	47	122
123	99	305	43,242	137,200	436 79	1 43	32	68	123
124	209	290	94,251	290,000	450 96	1 55	32	68	124
125	68	280	33,000	100,000	485 29	1 73	33	67	125
126	32	296	13,376	55,662	418 00	1 41	24	76	126
127	109	305	51,500	180,000	472 48	1 55	29	71	127
128	33	260	15,417	45,750	467 18	1 80	34	66	128
129	80	300	48,913	465,000	611 41	2 04	11	89	129
130	295	290	112,545	306,040	381 51	1 32	37	63	130
131	51	300	19,143	64,000	375 29	1 25	30	70	131
132	51	300	29,300	90,000	574 51	1 92	33	67	132
133	132	300	32,439	140,215	245 75	81	23	77	133
134	34	300	14,200	30,000	417 65	1 39	47	53	134
135	13	288	3,300	20,000	253 85	88	17	83	135
136	63	300	23,900	80,000	379 37	1 26	30	70	136
138	57	300	21,500	70,000	377 19	1 26	31	69	138
139	47	300	24,700	85,000	525 53	1 75	29	71	139
140	78	305	30,000	100,000	384 62	1 23	30	70	140
141	28	300	11,000	50,000	392 86	1 31	22	78	141
142	91	300	35,500	140,000	390 11	1 30	25	75	142
143	650	300	357,375	1,000,000	519 03	1 73	36	64	143
	3,215	Average 298	1,467,538	4,709,039	Average 435 56	Average 1 46	Average 31	Average 69	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

CARRIAGES, VEHICLES AND PARTS THEREOF, MOTORS, ETC—TABLE No. 5.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.			
144	37	280	15,600	55,000	421 62	1 50	28	72	144
145	91	305	46,847	176,222	514 78	1 69	29	71	145
146	61	305	25,000	500,000	409 84	1 34	5	95	146
147	324	306	119,524	396,666	368 90	1 21	30	70	147
148	344	300	150,944	600,000	438 81	1 46	25	75	148
149	60	295	28,500	125,000	475 00	1 61	23	77	149
150	185	300	84,000	400,000	454 05	1 51	21	79	150
151	43	300	22,000	50,000	511 63	1 71	44	56	151
152	16	300	6,600	30,000	412 87	1 38	22	78	152
153	16	310	5,720	23,500	357 50	1 15	24	76	153
154	79	300	29,600	185,000	374 68	1 25	54	46	154
156	11	300	5,229	18,058	475 33	1 58	29	71	156
157	141	290	66,000	252,000	468 09	1 61	26	74	157
158	75	305	20,000	150,000	266 67	87	13	87	158
159	13	305	6,557	34,500	504 38	1 65	16	84	159
160	42	300	21,250	120,000	505 25	1 69	18	82	160
161	41	300	18,000	75,000	439 02	1 46	24	76	161
162	124	305	69,325	345,425	559 06	1 83	20	80	162
	1,703	Average 300	740,696	3,546,311	Average 442 08	Average 1 47	Average 25	Average 75	

AGRICULTURAL IMPLEMENTS, DAIRY MACHINERY, ETC.—TABLE No. 6.

163	29	280	8,000	22,000	275 86	99	36	64	163
164	17	315	5,500	25,000	323 53	1 03	22	78	164
165	65	305	15,000	225,000	230 77	76	7	93	165
166	140	305	78,000	500,000	557 14	1 83	17	83	166
167	94	300	41,500	500,000	441 49	1 47	8	92	167
168	244	250	128,752	500,000	527 67	2 11	26	74	168
169	18	300	10,509	30,620	583 83	1 95	34	66	169
170	190	250	70,000	500,000	368 42	1 47	14	86	170
171	43	305	24,400	100,000	567 45	1 86	24	76	171
172	8	305	2,750	5,500	343 95	1 13	50	50	172
173	14	300	6,600	10,000	471 43	1 57	66	34	173
174	39	300	15,300	100,000	390 26	1 30	15	85	174
175	75	310	47,040	125,000	627 20	2 02	38	62	175
176	27	300	11,900	30,000	440 74	1 27	40	60	176
177	64	305	41,453	148,000	647 70	2 12	29	71	177
178	80	313	26,900	150,000	336 25	1 07	18	82	178
179	22	300	9,000	25,000	409 09	1 36	36	64	179
	1,169	Average 297	542,604	2,996,120	Average 443 69	Average 1 49	Average 28	Average 72	

PIANO, ORGAN AND MUSICAL INSTRUMENT FACTORIES.—TABLE No. 7.

180	36	300	26,000	60,000	722 22	2 41	43	57	180
181	101	300	50,100	120,000	496 04	1 65	42	58	181
182	113	300	59,885	151,932	529 96	1 80	39	61	182
183	3	280	900	4,516	300 00	1 07	20	80	183
184	55	305	26,747	68,000	482 67	1 58	39	61	184
185	31	300	14,344	84,063	462 73	1 54	17	83	185
186	38	300	18,127	65,000	477 03	1 59	28	72	186
187	232	282	119,700	375,000	515 95	1 83	32	68	187
	609	Average 296	315,803	928,511	Average 498 32	Average 1 68	Average 33	Average 67	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

WOOD-PULP, PAPER AND STATIONERY.—TABLE No. 8

Schedule No.	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
188	105	300	34,600	93,000	329 52	1 10	37	63	188
189	19	305	7,372	35,700	388 00	1 27	21	79	189
190	55	306	29,154	204,000	530 00	1 73	14	86	190
191	14	240	7,400	50,000	528 57	2 20	15	85	191
192	20	305	9,400	30,000	470 00	1 54	31	69	192
193	198	286	85,748	538,331	433 07	1 51	16	84	193
194	9	305	2,625	4,075	291 67	96	64	36	194
195	25	305	7,850	26,000	314 00	1 30	30	70	195
196	14	275	8,001	46,347	517 50	2 08	17	83	196
197	90	235	36,537	191,440	405 74	1 73	19	81	197
198	20	305	7,200	30,000	306 00	1 18	24	76	198
199	96	305	43,975	139,000	548 07	1 50	32	68	199
200	7	305	2,000	17,500	285 71	94	11	89	200
201	11	300	5,000	30,000	454 55	1 52	17	83	201
	683	Average 291	286,862	1,435,393	Average 414 46	Average 1 47	Average 25	Average 75	

FOUNDRIES, ROLLING MILLS, STRUCTURAL IRON.—TABLE No. 9.

202	129	295	81,000	303,000	627 91	2 13	27	73	202
203	38	300	15,500	60,000	407 09	1 36	26	74	203
204	28	313	16,129	95,000	576 04	1 84	17	83	204
205	24	305	9,380	48,000	390 83	1 28	20	80	205
206	45	267	23,223	55,203	516 07	1 93	42	58	206
207	46	305	29,174	75,000	634 22	2 08	39	61	207
208	95	300	65,034	158,652	684 57	2 28	41	59	208
209	125	305	85,700	120,000	685 60	2 25	71	29	209
210	125	270	60,300	165,000	480 24	1 78	37	63	210
211	6	260	3,972	11,460	662 00	2 55	35	65	211
212	103	300	26,000	75,000	252 83	84	35	65	212
213	49	267	23,079	70,000	471 00	1 76	33	67	213
214	45	300	20,668	56,018	459 29	1 53	37	63	214
215	125	124	51,825	136,620	414 60	3 34	38	62	215
216	45	300	16,651	55,000	370 00	1 23	30	70	216
217	10	305	4,800	10,000	480 00	1 57	48	52	217
218	9	305	2,600	16,500	288 89	95	16	84	218
219	156	296	86,157	384,007	552 21	1 87	23	77	219
220	317	307	182,152	628,093	574 61	1 87	29	71	220
221	141	242	64,147	309,399	454 94	1 88	21	79	221
222	135	300	65,000	300,000	481 48	1 60	22	78	222
223	16	300	6,000	20,000	375 00	1 25	30	70	223
224	22	300	11,711	30,000	532 32	1 77	39	61	224
225	13	300	4,333	6,785	333 33	1 11	64	36	225
226	45	293	26,300	50,000	584 44	1 99	53	47	226
	1,892	Average 286	980,835	3,238,737	Average 491 58	Average 1 76	Average 35	Average 65	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

STOVES, HOT AIR FURNACES, ETC.—TABLE NO. 10.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
227	42	290	22,110	51,553	526 43	1 82	43	57	227
228	115	300	75,577	240,000	657 19	2 19	31	69	228
229	76	313	49,040	125,000	645 26	2 06	31	69	229
230	103	305	47,256	126,000	458 80	1 50	38	62	230
231	54	310	25,250	55,000	467 59	1 51	46	54	231
232	123	262	65,874	180,500	535 53	2 04	36	64	232
233	248	299	106,700	230,000	430 24	1 45	46	54	233
234	36	300	24,000	80,000	666 67	2 22	30	70	234
235	8	300	4,000	10,000	500 00	1 67	40	60	235
236	129	260	49,155	97,000	381 05	1 47	51	49	236
237	24	240	11,520	32,000	480 00	2 00	36	64	237
238	50	235	27,725	70,000	554 50	2 36	40	60	238
240	47	300	29,500	80,000	627 66	2 09	37	63	240
241	82	290	47,000	110,000	573 17	1 98	43	57	241
242	40	305	24,000	70,000	600 00	1 97	34	66	242
	1,177	Average 287	608,707	1,557,053	Average 540 27	Average 1 89	Average 39	Average 61	

ENGINE, BOILER AND MACHINERY FACTORIES.—TABLE NO. 11.

243	175	305	100,000	280,000	571 43	1 87	36	64	243
244	18	280	9,490	30,000	527 22	1 89	32	68	244
245	31	300	16,000	40,000	516 13	1 72	40	60	245
248	15	305	4,740	15,000	316 00	1 04	32	68	248
249	86	309	45,067	80,508	523 95	1 70	56	44	249
250	55	300	15,548	37,824	282 69	91	41	59	250
251	8	313	8,000	35,000	1,000 00	2 12	23	77	251
252	19	300	6,200	20,000	326 33	1 09	31	69	252
253	131	305	84,914	300,000	648 17	2 12	28	72	253
254	29	300	15,600	60,000	537 93	1 79	16	84	254
255	66	300	35,300	125,000	534 85	1 78	28	72	255
256	19	310	12,500	30,000	657 89	2 12	42	58	256
258	14	300	5,608	10,000	400 57	1 33	56	44	258
259	39	305	21,802	46,870	559 03	1 83	47	53	259
260	51	300	28,000	75,000	549 02	1 83	37	63	260
261	17	306	10,000	25,000	588 24	1 92	40	60	261
262	90	300	33,412	150,000	371 24	1 24	22	78	262
263	10	305	6,710	15,000	671 00	2 20	45	55	263
264	55	183	16,241	50,946	295 27	1 61	32	68	264
265	3	300	20,504	43,103	683 47	2 28	48	52	265
266	22	305	8,000	40,000	363 64	1 19	20	80	266
267	22	305	10,800	31,000	490 91	1 61	35	65	267
268	37	305	13,600	38,750	367 57	1 21	35	65	268
269	36	300	20,100	52,000	558 33	1 86	39	61	269
270	24	300	5,396	15,000	224 83	75	36	64	270
271	241	300	92,000	425,000	381 74	1 27	22	78	271
272	28	305	9,000	25,000	321 43	1 05	36	64	272
273	10	310	6,300	15,000	630 00	2 00	42	58	273
274	69	300	38,000	90,000	550 72	1 84	42	58	274
275	6	305	3,250	10,000	541 67	1 78	32	68	275
276	116	308	54,000	176,000	465 52	1 51	31	69	276
277	22	310	15,865	100,000	721 12	2 33	16	84	277
278	50	300	27,000	100,000	540 00	1 80	27	73	278
279	17	300	9,793	30,620	576 06	1 92	32	68	279
280	358	280	202,985	600,000	567 00	2 03	38	62	280
281	19	305	7,827	35,000	411 95	1 35	22	78	281

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

TABLE NO. 11—*Continued.*

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
282	38	300	16,600	120,000	436 84	1 46	14	86	282
283	260	302	108,800	325,000	418 46	1 38	33	67	283
284	17	286	8,300	15,000	488 24	1 71	55	45	284
285	351	305	126,225	239,420	359 62	1 46	52	48	285
286	5	305	2,675	10,000	535 00	1 75	27	73	286
287	355	300	188,000	350,000	529 58	1 77	54	46	287
	3,061	Average 299	1,470,152	4,312,041	Average 477 16	Average 1 65	Average 35	Average 65	

METALLIC ROOFING AND LIGHT IRONWARE.—TABLE NO. 12.

288	31	300	20,800	50,000	670 00	2 23	42	58	288
289	39	305	20,402	50,000	523 13	1 72	41	59	289
290	44	300	22,000	100,000	500 00	1 67	22	78	290
291	23	300	7,350	25,000	319 57	1 07	29	71	291
292	10	305	6,800	40,000	680 00	2 24	17	83	292
293	39	305	23,300	120,000	597 44	1 96	19	81	293
294	40	305	23,913	50,000	597 82	1 96	48	52	294
295	79	300	37,570	415,000	475 57	1 59	9	91	295
296	5	305	3,200	5,200	640 00	2 10	62	38	296
297	28	310	14,078	40,979	502 79	1 62	34	66	297
298	12	300	6,300	23,000	525 00	1 75	27	73	298
299	10	300	4,250	8,873	425 00	1 42	48	52	299
300	42	305	29,070	80,000	692 19	2 27	36	64	300
301	41	275	9,000	160,000	219 54	80	6	94	301
302	85	305	42,409	150,000	498 93	1 64	28	72	302
303	252	300	156,000	540,000	619 05	2 06	29	71	303
304	54	300	28,300	150,000	524 07	1 75	19	81	304
305	18	325	5,100	25,000	283 33	87	20	80	305
306	59	300	28,700	112,839	486 44	1 62	25	75	306
307	10	300	4,250	8,872	425 00	1 42	47	53	307
308	31	305	15,600	75,000	503 23	1 65	21	79	308
309	109	305	60,000	250,000	550 46	1 80	24	76	309
310	70	305	30,000	130,000	428 57	1 41	23	77	310
311	10	300	4,350	6,000	435 00	1 45	72	28	311
	1,141	Average 302	602,742	2,615,763	Average 505 09	Average 1 67	Average 31	Average 69	

WIRE FENCE, WIRE ROPE AND WIRE CLOTH FACTORIES.—TABLE NO. 13.

312	18	270	8,200	30,500	455 56	1 69	27	73	312
313	313	300	134,234	486,360	429 31	1 43	27	73	313
314	12	300	5,500	70,000	458 33	1 53	8	92	314
315	26	288	13,099	113,810	503 81	1 75	12	88	315
316	2	295	590	5,000	295 00	1 00	12	88	316
317	116	300	41,000	320,000	353 45	1 18	19	81	317
318	23	300	8,000	26,000	347 83	1 16	31	69	318
319	22	300	6,056	42,264	274 92	92	17	83	319
320	43	275	28,250	300,000	657 00	2 39	9	91	320
321	70	275	44,065	375,000	629 50	2 29	12	88	321
322	17	300	9,000	35,000	529 41	1 76	26	74	322
	662	Average 291	297,994	1,803,934	Average 448 56	Average 1 55	Average 18	Average 82	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

BRASSWARE AND PLUMBERS' SUPPLIES.—TABLE No. 14.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%		
324	135	305	58,125	250,000	430 56	1 41	33	77	324
325	4	270	3,825	10,000	958 25	3 55	38	62	325
326	30	300	16,000	55,000	533 33	1 78	29	71	326
327	14	300	8,000	50,000	571 43	1 90	16	84	327
328	65	300	22,327	40,000	343 50	1 48	56	44	328
330	33	250	14,389	72,667	436 03	1 74	20	80	330
331	27	279	14,040	26,000	520 00	1 90	54	46	331
332	66	300	23,276	65,000	352 67	1 18	35	65	332
333	19	300	10,707	30,000	563 53	1 88	36	64	333
334	28	305	11,405	31,158	407 32	1 34	37	63	334
335	64	300	38,667	127,000	604 17	2 01	30	70	335
336	75	300	38,267	127,000	510 23	1 70	30	70	336
337	152	301	82,209	330,720	540 85	1 80	25	75	337
338	51	305	20,800	80,000	407 84	1 34	26	74	338
	763	Average 294	362,037	1,294,545	Average 512 84	Average 1 79	Average 33	Average 67	

SILVER-PLATED WARE AND JEWELLERY FACTORIES.—TABLE No. 15.

339	72	300	42,476	129,068	663 69	2 21	33	67	339
340	22	300	10,640	98,491	483 64	1 61	11	89	340
341	100	300	59,630	159,537	596 30	1 99	37	63	341
342	28	300	11,000	30,000	392 86	1 31	37	63	342
343	6	300	2,400	5,000	400 00	1 33	48	52	343
	228	Average 300	126,146	422,096	Average 507 30	Average 1 69	Average 33	Average 67	

WOOLLEN, COTTON AND YARN MILLS.—TABLE No. 16.

345	306	271	108,688	595,115	355 19	1 31	18	82	345
346	58	278	20,364	176,000	351 03	1 26	12	98	346
347	40	200	7,000	25,000	175 00	88	28	72	347
348	253	280	68,880	280,000	272 25	97	25	75	348
349	14	226	3,561	18,000	254 36	1 13	20	80	349
350	8	225	2,140	11,000	267 50	1 19	19	81	350
351	19	294	6,140	21,000	313 16	1 10	29	71	351
352	191	300	53,715	225,000	281 20	94	24	76	352
353	163	300	84,277	328,252	517 04	1 72	26	74	353
354	42	300	10,000	50,000	238 10	79	20	80	354
355	125	307	38,500	150,000	308 00	1 00	26	74	355
356	25	240	6,450	15,000	258 00	1 08	43	57	356
357	29	300	12,000	75,000	413 79	1 38	16	84	357
358	47	290	18,850	104,000	401 06	1 38	18	82	358
359	7	305	5,200	6,600	742 86	2 16	79	21	359
360	10	260	2,732	7,500	273 20	1 05	36	64	360
361	1,028	288	355,000	1,987,000	345 33	1 20	18	82	361
362	252	300	98,000	325,000	388 89	1 30	30	70	362
363	37	280	10,000	60,000	270 27	97	17	83	363
364	38	300	17,500	70,000	460 53	1 54	25	75	364
365	32	240	7,150	18,700	223 44	93	38	62	365
366	37	175	5,000	8,250	135 14	77	61	39	366
368	11	300	8,412	40,000	764 36	2 55	21	79	368
	2,772	Average 272	949,559	4,596,417	Average 348 25	Average 1 24	Average 28	Average 72	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

KNITTED GOODS FACTORIES.—TABLE NO. 17.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
370	43	300	14,500	50 000	337 21	1 12	29	71	370
371	98	312	28,503	139,559	290 85	93	20	80	371
372	35	293	13,100	98,000	374 29	1 28	13	87	372
373	120	265	32,500	160,000	270 83	1 02	20	80	373
375	106	275	40,351	200,000	380 67	1 38	20	80	375
376	36	300	7,450	27,000	206 94	68	28	72	376
377	256	305	95,000	300,000	371 09	1 22	32	68	377
378	25	300	4,936	41,000	197 44	66	12	88	378
379	52	293	12,823	85,000	246 54	84	15	85	379
380	245	300	70,000	300,000	285 71	95	23	77	380
381	215	300	73,500	360,000	341 86	1 14	20	80	381
382	48	295	14,700	96,000	306 25	1 04	18	82	382
383	35	300	10,322	75,000	294 91	98	14	86	383
384	110	245	24,362	66,000	600 00	2 45	37	63	384
	1,424	Average 292	442,047	1,997,559	Average 321 76	Average 1 12	Average 22	Average 78	

CLOTHING FACTORIES, MILLINERY, ETC.—TABLE NO. 18.

385	166	300	65,440	275,000	394 22	1 31	24	76	385
386	77	305	27,000	200,000	350 65	1 13	14	86	386
387	15	305	7,975	60,000	530 33	1 74	13	87	387
388	167	275	38,500	190,000	230 54	84	20	80	388
389	11	250	3,609	26,476	328 10	1 31	14	86	389
390	405	305	139,694	432,424	349 74	1 15	32	68	390
391	85	300	24,000	75,000	282 35	94	32	68	391
392	320	300	100,000	350,000	312 50	1 04	29	71	392
393	244	300	83,000	270,000	340 16	1 13	31	69	393
394	68	276	20,364	176,000	299 47	1 08	12	88	394
395	213	305	100,000	370,000	469 48	1 54	27	73	395
396	56	300	15,830	30,511	282 68	94	52	48	396
397	172	300	55,000	145,000	319 77	1 07	39	61	397
398	185	288	27,000	122,600	146 00	51	22	78	398
	2,184	Average 294	707,412	2,723,011	Average 331 14	Average 1 12	Average 25	Average 75	

BOOT AND SHOE FACTORIES.—TABLE NO. 19.

399	107	305	35,000	275,000	327 10	1 07	13	87	399
400	54	300	28,500	100,000	527 78	1 76	28	72	400
401	112	300	62,787	245,000	560 60	1 87	26	74	401
402	24	230	9,442	30,000	393 42	1 71	31	69	402
403	58	300	20,517	103,447	353 74	1 18	20	80	403
405	90	305	32,000	120,000	355 56	1 17	27	73	405
406	59	285	19,731	54,848	334 42	1 17	36	64	406
407	315	283	153,841	1,309,665	488 38	1 73	12	88	407
408	118	303	53,065	242,700	449 70	1 48	22	78	408
409	160	300	95,000	300,000	593 75	1 98	32	68	409
410	29	275	12,375	60,000	426 72	1 55	21	79	410
411	256	275	86,734	400,000	338 80	1 23	22	78	411
412	78	305	32,000	150,000	410 26	1 35	21	79	412
413	100	300	50,000	150,000	500 00	1 67	33	67	413
414	138	300	64,500	280,000	467 39	1 56	23	77	414
415	46	300	19,150	70.000	416 30	1 39	27	73	415

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

TABLE No 19.—*Continued.*

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
416	240	290	75,000	300,000	312 50	1 08	25	75	416
417	40	280	9,500	60,000	237 50	85	16	84	417
418	81	305	46,000	125,000	567 90	1 86	37	63	418
419	103	250	35,500	230,000	344 66	1 38	15	85	419
420	100	300	33,000	175,000	330 00	1 10	19	81	420
421	56	285	24,966	100,312	445 82	1 76	25	75	421
422	41	300	19,299	77,472	470 71	1 57	25	75	422
423	78	300	25,000	125,000	320 51	1 07	20	80	423
	2,483	Average 291	$1,042,987	$5,083,444	Average 415 56	Average $1 44	Average 24	Average 76	

FURRIERS, HAT AND CAP FACTORIES.—TABLE No. 20.

424	24	295	8,500	30,000	354 17	1 20	28	72	424
425	30	260	8,000	70,000	266 67	1 02	11	89	425
426	98	300	43,000	130,000	438 78	1 46	33	67	426
427	30	300	10,000	25,000	333 33	1 11	40	60	427
428	111	300	44,320	130,000	390 29	1 30	34	66	428
	293	Average 291	113,820	385,000	Average 356 65	Average 1 22	Average 29	Average 71	

TANNERIES, HARNESS FACTORIES, ETC.—TABLE No. 21.

429	73	300	33,200	160,000	454 79	1 52	21	79	429
430	12	310	5,515	40,000	459 58	1 48	14	86	430
432	26	300	11,603	101,000	446 27	1 49	11	89	432
433	4	300	4,000	15,000	1,000 00	3 33	27	73	433
434	35	300	13,600	100,000	388 57	1 30	13	87	434
435	37	300	14,182	43,426	383 30	1 28	33	67	435
436	74	305	26,800	170,000	362 16	1 19	16	84	436
437	4	305	1,880	15,000	470 00	1 54	13	87	437
438	36	306	15,513	180,129	430 02	1 41	9	91	438
439	28	310	16,870	50,000	602 50	1 94	34	66	439
440	1	75	130	3,000	130 00	1 73	4	96	440
441	155	303	95,300	1,000,000	614 84	2 03	10	90	441
442	14	300	5,324	61,000	380 29	1 27	9	91	442
443	4	300	2,000	25,000	500 00	1 67	8	92	443
444	5	300	2,600	83,000	520 00	1 73	3	97	444
445	60	310	15,000	75,000	250 00	81	20	80	445
446	215	300	66,000	500,000	306 97	1 02	13	87	446
447	17	300	5,986	36,637	352 12	1 17	16	84	447
448	53	313	15,933	75,000	300 62	96	21	79	448
449	24	305	7,603	100,574	316 79	1 02	7	93	449
450	25	260	15,071	127,000	602 84	2 32	12	88	450
451	42	305	23,000	175,000	547 62	1 80	13	87	451
452	79	312	35,000	150,000	443 04	1 42	23	77	452
453	23	250	12,560	126,000	546 09	2 18	10	90	453
454	147	300	38,000	200,000	258 50	86	19	81	454
	1,193	Average 291	482,670	3,611,766	Average 442 68	Average 1 54	Average 15	Average 85	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

FLOUR AND FEED MILLS, CEREAL FOODS.—TABLE No. 22

Schedule No.	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c	%	%	
455	47	279	22,197	141,142	472 28	1 69	16	84	455
456	42	313	22,000	700,000	523 81	1 67	3	97	456
457	13	300	9,861	109,229	758 54	2 53	9	91	457
458	19	300	17,600	500,000	926 32	3 19	4	96	458
459	10	300	5,669	132,503	566 90	1 89	4	96	459
460	6	300	2,496	40,000	416 00	1 39	6	94	460
461	7	307	2,800	90,000	400 00	1 33	3	97	461
462	46	300	16,500	260,000	358 69	1 20	6	94	462
463	9	275	3,468	75,000	385 33	1 40	5	95	463
464	14	290	6,542	107,000	467 29	1 61	6	94	464
465	8	305	4,550	115,000	568 75	1 86	4	96	465
466	23	312	12,000	150,000	521 74	1 99	8	92	466
467	8	307	3,337	115,000	419 12	1 37	3	97	467
468	3	314	2,000	35,000	666 67	2 16	6	94	468
469	18	300	11,300	355,142	627 78	2 09	3	97	469
470	4	315	1,678	45,000	419 50	1 33	4	96	470
471	16	305	6,900	220,000	431 25	1 41	3	97	471
473	25	300	13,400	500,000	536 00	1 79	3	97	473
474	19	300	10,600	130,000	557 90	1 86	8	92	474
475	98	300	13,200	70,000	134 69	45	19	81	475
476	8	300	4,200	70,000	525 00	1 75	6	94	476
478	23	300	12,972	239,000	564 00	1 88	5	95	478
479	5	300	2,640	35,000	528 00	1 76	8	92	479
480	6	300	2,988	77,500	498 00	1 66	4	96	480
481	2	160	918	6,750	459 00	2 96	14	86	481
482	6	313	2,000	70,000	333 33	1 07	3	97	482
483	6	200	3,000	50,000	500 00	2 50	6	94	483
484	17	300	9,156	410,673	538 59	1 80	2	98	484
485	9	300	5,300	81,000	588 89	1 96	7	93	485
487	9	305	5,000	200,000	555 56	1 85	3	97	487
488	18	300	10,676	233,182	593 11	1 98	5	95	488
490	12	300	6,500	171,000	541 67	1 80	4	96	490
491	6	300	4,410	20,000	735 00	2 45	22	78	491
492	11	300	7,164	135,163	651 27	2 17	5	95	492
493	16	225	10,700	220,000	665 88	2 96	5	95	493
494	22	300	8,569	186,335	389 50	1 30	5	95	494
495	4	300	1,600	30,000	400 00	1 33	5	95	495
496	15	300	9,620	190,000	641 33	2 14	5	95	496
498	24	300	12,000	300,000	500 00	1 67	4	96	498
499	10	300	6,050	300,000	605 00	2 02	2	98	499
500	16	305	7,700	110,000	481 25	1 58	7	93	500
501	5	305	2,500	35,000	500 00	1 64	7	93	501
502	35	275	21,858	544,767	724 51	2 27	4	96	502
503	30	312	12,000	100,000	600 00	1 92	12	88	503
504	60	305	19,000	200,000	316 67	1 04	10	90	504
505	28	300	15,450	1,000,000	551 79	1 84	2	98	505
506	41	300	16,000	168,000	390 24	1 30	10	90	506
507	475	300	161,125	4,936,339	339 21	1 13	3	97	507
508	18	300	8,800	200,000	488 88	1 63	4	96	508
510	48	300	31,000	800,000	645 83	2 15	4	96	510
	1,420	Average 300	$608,994	$14,009,725	Average $510 19	Average $1 83	Average 6	Average 94	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

BAKERS AND CONFECTIONERS.—TABLE No. 23.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
511	44	305	20,154	125,000	458 05	1 50	16	84	511
512	65	300	21,410	75,000	329 23	1 10	29	71	512
513	366	300	160,000	700,000	437 16	1 46	23	77	513
514	46	280	24,958	132,000	542 57	1 94	19	81	514
515	476	300	155,627	1,000,000	326 95	1 09	16	84	515
516	20	175	6,750	40,000	337 50	1 93	17	83	516
517	178	305	88,400	536,900	496 63	1 63	11	89	517
518	37	300	15,622	77,041	422 22	1 41	20	80	518
	1,232	Average 283	492,911	2,685,941	Average 418 79	Average 1 51	Average 19	Average 81	

CANNING, PORK AND BACON FACTORIES.—TABLE No. 24.

520	155	313	30,200	90,000	194 84	62	34	66	520
521	77	120	7,026	46,175	91 25	76	15	85	521
522	111	310	54,924	128,600	494 81	1 60	43	57	522
523	55	300	33,833	776,121	615 15	2 05	4	96	523
524	161	300	134,000	4,000,000	832 30	2 77	3	97	524
525	100	200	5,231	25,000	52 31	26	21	79	525
526	82	310	53,600	1,165,000	653 66	2 11	5	95	526
527	58	125	10,800	50,000	186 21	1 49	21	79	527
529	335	282	73,105	668,946	218 22	77	11	89	529
530	163	150	17,000	150,000	104 29	70	11	89	530
531	203	150	17,600	135,000	86 70	58	13	87	531
532	145	300	74,056	1,092,944	510 73	1 70	7	93	532
533	173	150	16,800	125,000	97 11	65	13	87	533
535	77	300	13,154	210,000	170 83	57	6	94	535
536	79	300	18,208	138,176	230 48	77	13	87	536
	1,974	Average 241	559,537	8,800,962	Average 302 59	Average 1 16	Average 15	Average 85	

DAIRY PRODUCTS AND OTHER FOODS.—TABLE No. 25.

537	5	280	1,131	51,133	226 20	81	2	98	537
538	4	300	1,400	32,000	350 00	1 17	4	96	538
539	24	305	10,460	100,000	435 83	1 43	10	90	539
540	7	40	1,000	4,000	142 86	3 57	25	75	540
541	620	180	123,500	2,500,000	199 19	1 11	5	95	541
542	5	200	900	12,408	180 00	90	7	93	542
543	109	306	50,227	617,000	460 80	1 51	8	92	543
544	120	300	52,411	409,250	436 76	1 46	13	87	544
545	10	300	4,500	26,000	450 00	1 50	17	83	545
546	39	300	9,500	75,000	243 59	81	13	87	546
547	12	300	4,453	80,000	371 08	1 24	7	93	547
548	16	300	5,440	21,000	340 00	1 13	3	97	548
549	9	225	3,273	28,729	363 67	1 61	11	89	549
550	5	365	1,356	10,000	271 20	74	14	86	550
551	36	300	28,727	122,227	797 72	2 66	24	76	551
552	250	210	43,934	300,000	175 74	84	15	85	552
553	38	305	26,000	170,000	684 21	2 24	15	85	553
554	7	305	3,129	28,903	447 00	1 47	11	89	554
	1,316	Average 268	371,341	4,587,650	Average 365 33	Average 1 46	Average 11	Average 89	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

DISTILLERIES, BREWERIES, AND TOBACCO FACTORIES.—TABLE No. 26.

Schedule No.	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.		%	
555	17	300	12,029	116,760	707 59	2 39	10	90	555
556	18	300	12,047	54,990	668 89	2 23	24	76	556
557	6	305	5,000	25,500	833 33	2 73	20	80	557
558	3	300	2,292	16,000	764 00	2 55	14	86	558
559	100	300	20,039	100,000	200 39	67	20	80	559
560	15	305	8,200	75,000	546 67	1 79	11	89	560
561	15	305	5,830	32,334	388 67	1 28	18	82	561
562	8	90	760	3,000	95 00	1 56	25	75	562
563	13	305	6,300	60,000	484 62	1 59	11	89	563
564	260	300	129,438	414,830	497 84	1 66	31	69	564
565	197	260	104,595	1,200,614	530 94	2 04	9	91	565
566	62	300	32,750	90,000	528 23	1 76	36	64	566
567	6	305	3,500	20,000	583 33	1 91	18	82	567
568	10	335	7,200	33,000	720 00	2 13	22	78	568
569	5	300	2,000	5,500	400 00	1 33	36	64	569
570	309	300	182,724	681,257	588 10	1 96	27	73	570
571	7	305	3,780	26,300	540 00	1 77	14	86	571
572	189	313	116,727	519,000	617 60	2 00	44	56	572
573	16	306	13,420	64,000	838 75	2 74	21	79	573
574	3	90	800	8,000	266 67	2 96	10	90	574
575	73	300	35,600	69,000	487 67	1 63	52	48	575
576	80	300	35,000	110,000	439 50	1 47	32	68	576
577	131	300	44,189	370,770	337 32	1 12	12	88	577
578	29	315	22,675	91,088	781 90	2 48	25	75	578
579	17	305	5,200	14,500	305 88	1 00	36	64	579
	1,589	Average 286	812,095	4,201,443	Average 526 12	Average 1 87	Average 23	Average 77	

CHEMICAL WORKS.—TABLE No. 27.

580	1	255	381	7,000	381 00	1 50	5	95	580
581	24	300	9,152	60,000	381 33	1 27	15	85	581
582	10	305	4,823	46,000	482 30	1 58	10	90	582
583	67	280	30,912	262,354	461 37	1 65	12	88	583
584	6	305	3,000	12,000	500 00	1 64	25	75	584
585	29	300	13,900	36,500	479 31	1 60	38	62	585
586	528	300	303,725	1,000,000	575 24	1 92	30	70	586
587	18	300	12,000	35,500	666 67	2 22	34	66	587
588	3	280	1,520	19,742	506 67	1 81	8	92	588
589	25	300	6,100	80,000	244 00	81	8	92	589
591	144	300	54,400	291,807	377 78	1 26	19	81	591
592	7	313	3,300	10,000	471 43	1 51	33	67	592
593	24	305	19,010	61,991	792 08	2 60	31	69	593
	886	Average 296	462,223	1,862,894	Average 486 09	Average 1 64	Average 21	Average 79	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

OIL, PAINT AND VARNISH FACTORIES.—TABLE No. 28.

Schedule No	Number of persons employed.	Number of days in operation	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c.	$ c.	%	%	
594	40	300	23,500	700,000	587 50	1 96	4	96	594
595	31	305	12,116	118,000	390 84	1 26	10	90	595
596	78	305	46,000	285,000	589 75	1 93	16	84	596
597	7	305	4,109	98,025	587 00	1 90	4	96	597
598	15	305	12,478	119,333	831 87	2 73	10	90	598
600	30	300	28,124	140,000	704 13	2 35	20	80	600
601	202	300	78,000	200,000	386 14	1 29	39	61	601
602	6	300	3,100	30,000	516 67	1 72	10	90	602
603	75	310	36,484	75,000	486 45	1 57	49	51	603
604	5	305	2,200	14,500	440 00	1 44	15	85	604
605	9	300	8,392	45,000	932 44	3 11	19	81	605
606	59	300	26,000	280,000	440 68	1 47	9	91	606
	557	Average 303	280,503	2,104,858	Average 574 46	Average 1 89	Average 17	Average 83	

GAS AND ELECTRIC LIGHT, HEAT AND POWER WORKS.—TABLE No. 29.

607	4	365	3,722	11,610	930 50	2 55	32	68	607
608	10	365	6,932	10,000	693 20	1 90	69	31	608
609	5	365	2,160	5,200	432 00	1 18	40	60	609
610	9	365	4,200	30,000	466 67	1 28	14	86	610
611	4	365	1,560	5,000	391 25	1 07	31	69	611
612	11	365	4,260	15,000	387 25	1 06	28	32	612
613	5	365	2,534	11,000	506 80	1 39	23	77	613
614	4	365	1,155	7,500	288 75	79	15	85	614
615	10	365	6,180	11,000	618 00	1 69	56	44	615
616	4	365	910	2,779	227 50	62	32	68	616
617	2	365	940	3,636	470 00	1 29	26	74	617
619	5	365	2,447	11,513	489 40	1 34	22	78	619
620	714	365	418,126	1,735,983	585 61	1 60	24	76	620
621	2	365	800	5,481	400 00	1 10	15	85	621
622	31	365	25,560	60,000	824 52	2 26	43	57	622
623	139	365	93,679	382,860	673 95	1 85	24	76	623
624	4	365	1,200	4,000	300 00	82	30	70	624
625	11	365	6,566	26,716	596 91	1 63	25	75	625
626	2	365	925	4,327	462 50	1 19	21	79	626
627	15	365	10,485	112,000	699 00	1 91	9	91	627
628	6	365	3,203	14,000	533 83	1 46	23	77	628
629	5	365	3,000	7,500	600 00	1 64	40	60	629
630	121	365	61,656	175,000	509 55	1 40	35	65	630
631	24	365	12,709	53,444	529 50	1 45	24	76	631
	1,147	Average 365	674,909	2,705,549	Average 525 69	Average 1 44	Average 29	Average 71	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

PRINTING AND ALLIED TRADES.—TABLE No. 30.

Schedule No	Number of persons employed.	Number of days in operation.	Amount paid in wages and salaries.	Gross value of product.	Employees' average annual earnings.	Employees' daily rate of pay.	Per cent. wages of gross value of product.	Per cent. cost of material, interest, insurance, taxes, etc., and profit.	Schedule No.
			$	$	$ c	$ c.	%	%	
632	73	305	26,246	75,000	359 53	1 15	35	65	632
633	20	305	12,029	24,500	601 45	1 97	47	53	633
634	7	305	3,600	4,000	514 67	1 69	90	10	634
635	95	305	47,500	144,000	500 00	1 64	33	67	635
636	6	305	3,110	3,750	625 00	2 05	83	17	636
637	10	300	3,016	4,000	301 60	1 05	75	25	637
638	115	305	66,457	200,000	577 90	1 89	33	67	638
639	87	300	44,987	157,646	517 10	1 72	29	71	639
641	4	312	2,200	4,000	550 00	1 76	55	45	641
642	5	305	5,500	18,000	1,100 00	3 61	31	69	642
643	62	305	30,000	55,000	483 87	1 59	55	45	643
644	3	305	1,032	4,000	344 00	1 13	26	74	644
645	32	300	21,750	40,000	679 69	2 27	54	46	645
646	12	306	8,548	19,495	712 33	2 33	44	56	646
647	110	312	34,298	57,466	329 91	1 05	60	40	647
648	162	305	81,500	203,000	503 09	1 65	40	60	648
649	6	304	3,170	5,930	528 33	1 74	53	47	649
650	4	300	1,194	1,800	298 50	1 00	66	34	650
		Average			Average	Average	Average	Average	
	813	305	396,137	1,021,587	501 50	1 74	50	50	

BRICK, TILE AND PORTLAND CEMENT WORKS.—TABLE No 31.

651	110	54	23,143	60,021	210 39	3 90	39	61	651
652	26	85	13,652	27,004	525 08	6 18	51	49	652
654	19	300	11,000	25,000	578 95	1 93	44	56	654
655	25	300	12,100	36,000	484 00	1 61	34	66	655
656	70	203	25,000	75,000	357 01	1 75	33	67	656
657	104	288	62,589	83,297	601 81	2 09	75	25	657
658	28	305	15,902	48,718	567 90	1 86	33	67	658
659	8	300	3,385	10,000	423 12	1 41	34	66	659
660	9	300	5,000	10,000	555 55	1 85	50	50	660
661	10	300	5,200	14,000	520 00	1 73	37	63	661
662	154	312	90,029	137,720	585 84	1 88	65	35	662
663	20	110	6,000	17,000	300 00	2 73	35	65	663
664	22	215	9,513	15,500	432 42	2 01	61	39	664
665	17	175	5,752	13,296	338 35	1 93	43	57	665
666	23	300	10,818	31,208	470 00	1 57	35	65	666
667	36	300	22,664	60,000	629 56	70	38	62	667
669	30	200	7,774	13,530	259 13	1 30	57	43	669
670	1,348	364	969,153	7,758,624	718 96	1 97	12	88	670
671	30	305	16,846	48,710	561 53	1 84	35	65	671
672	3	160	630	2,600	210 00	1 31	24	76	672
		Average			Average	Average	Average	Average	
	2,092	244	1,316,150	8,487,228	466 40	2 07	42	58	

TABLE SHOWING WAGES AND SALARIES AND SHARE OF PRODUCT.—*Continued.*

MISCELLANEOUS INDUSTRIES.—TABLE No. 32.

673	9	300	5,725	9,178	636 11	2 12	62	38	673
675	28	313	19,500	72,000	696 43	2 23	27	73	675
676	25	305	15,000	50,000	600 00	1 97	30	70	676
677	54	310	24,500	100,000	453 70	1 46	25	75	677
678	6	305	4,040	40,000	673 33	2 21	10	90	678
679	30	300	10,000	64,000	333 33	1 11	16	84	679
	152	Average 311	78,765	335,178	Average 565 47	Average 1 85	Average 28	Average 72	

SUMMARY OF 32 TABLES.

	49,090	Average 290	21,392,444	111,392,169	Average 452 15	Average 1 58	Average 26 66	Average 73 34

INCREASE OR DECREASE OF PRODUCT AND OF WAGES.

The following table with figures calculated from the preceding tables shows the average increase in value of product reported by each classified industry, and the number of establishments reporting unspecified increases or decreases, or no change from the previous year. Succeeding columns show the average increases in wages as stated in the schedules, and the number of establishments reporting unspecified increases or decreases, or no change. In none of the 32 classes of industries was there a specified average decrease of either production or wage, and very few cases of unspecified decrease. This is a far more satisfactory showing than that in the last report.

INCREASE OR DECREASE OF PRODUCT AND OF WAGES.

No.	Industries.	Production.					Wages.					
		Average increase.	Average decrease.	Increase not specified.	Decrease not specified.	Same amount.	Average increase.	Average decrease.	Increase not specified.	Decrease not specified.	Same rate of wages.	Number benefited.
		%	%	No.	No	No.	%	%	No.	No.	No.	No.
1	Lumber, Saw Mills	17.1	.....	....	3	18	9.9	.....	.....	.....	26	2,793
2	Planing Mills, etc.	10.0	.....	4	....	2	8.1	.....	....	....	11	1,335
3	Woodenware specialties	13.7	.....	2	1	7	7.6	.....	3	....	11	706
4	Furniture, etc.	18.1	.....	2	....	6	9.1	.....	7	....	3	1,934
5	Carriages, etc.	22.3	.....	....	....	2	7.6	.....	3	....	6	733
6	Agricultural Implements	34.4	.....	2	....	3	9.1	.....	1	....	6	584
7	Pianos, Organs, etc.	16.5	.....	1	....	1	12.5	.....	2	....	3	91
8	Wood, Pulp and Paper	15.7	.....	....	....	5	8.1	.....	.....	....	8	293
9	Foundries, Rolling Mills, etc.	23.6	.....	2	1	4	8.3	.....	3	1	11	375
10	Stove Factories	30.4	.....	....	1	1	12.4	.....	.....	....	8	350
11	Machinery, etc.	16.4	.....	3	2	5	8.8	.....	5	....	12	1,377
12	Metallic Roofing, etc.	8.2	.....	1	....	3	7.0	.....	1	....	8	664
13	Wire Goods	1.6	.....	....	1	1	12.5	.....	.....	....	3	517
14	Brassware	28.4	.....	1	1	....	7.8	.....	1	....	4	528
15	Silverware	21.0	.....	....	....	....	10.0	.....	1	....	2	55
16	Woollens, Cottons, etc.	11.7	.....	1	....	4	5.6	.....	1	....	11	699
17	Knitted Goods	24.1	.....	2	....	2	9.4	.....	1	....	6	668
18	Clothing, etc.	18.4	.....	2	....	....	11.0	.....	2	....	3	1,233
19	Boots and Shoes	18.9	.....	3	....	3	11.7	.....	3	....	9	1,628
20	Furs, Hats and Caps	13.0	.....	....	....	....	13.3	.....	....	....	2	233
21	Tanneries, Leather Goods	14.8	.....	....	1	4	9.0	.....	1	....	6	918
22	Flour Mills, etc.	11.9	.....	3	1	20	9.0	.....	4	....	25	798
23	Bakeries, etc	14.6	.....	1	....	....	5.5	.....	2	....	2	676
24	Canning, Pork Packing, etc.	8.6	.....	....	1	4	8.8	.....	1	....	8	1,052
25	Dairy Products, etc.	11.6	.....	....	....	5	8.0	.....	1	....	8	1,061
26	Distillers, Brewers, Cigars, etc.	13.0	.....	1	....	6	7.0	.....	2	....	14	637
27	Chemical Works, etc.	17.1	.....	....	....	1	9.0	.....	....	....	7	710
28	Oils, Paints, etc.	6.0	.....	2	....	3	8.8	.....	2	....	6	475
29	Gas, Electric Works, etc.	4.8	.....	2	....	4	8.0	.....	3	....	9	187
30	Printing, etc.	15.2	.....	1	....	3	9.5	.....	3	....	5	460
31	Bricks, Cement, etc.	26.6	.....	3	1	3	8.3	.....	1	....	9	586
32	Miscellaneous	19.5	.....	....	....	2	11.0	.....	....	....	2	93
	Totals and averages	aver 16.48	aver	39	14	122	aver 9.12	aver	54	1	254	24,449

CHANGES OF WAGES AND HOURS.

Blacksmiths at St. Thomas had hours reduced with same pay.

Blacksmiths at Waterloo received increase of 60c. per week.

Boilermakers of T. M. R. at St. Thomas had increase of 1½c. per hour.

Boilermakers of M. C. R. at St. Thomas had increase of 1½c. per hour, and day reduced to 8 hours.

Boilermakers at Ottawa secured increase from 27c. to 30c. per hour, and 35c. next year.

Boilermakers at Waterloo got an increase of 1c. per hour.

Brewery workers to the number of 65 at Hamilton received increase of $1.50 and time and a-half for overtime.

Bricklayers at Berlin got increase to 45c per hour.

Bricklayers and Masons at Niagara Falls received advance from 50c. to 55c.

Builders' Labourers at Toronto to the number of 1,500 had raise from 25c. to 28c., a 9-hour day, and time and a-half for overtime.

Carpenters at Port Arthur and Fort William got increase to 40c. an hour.

Carpenters and Joiners at St. Catharines to the number of 100 received increase from 33c. to 35c. per hour.

Carpenters at Toronto to the number of 2,500 had increase from 33c. to 35c. per hour.

Cigarmakers at London to the number of 254 received increases of 50c. and $1 per thousand.

Civic employees at London received increases of $25 to $100 per annum.

Civic employees at St. Catharines received increases.

Civil servants of the Province of Ontario had day lengthened one half hour.

Coatmakers to the number of 35 at London received 12 per cent. increase in piece work prices; about $3 per week.

Coatmakers at Hamilton to the number of 125 got 2½ per cent. increase.

Commercial Telegraphers of C. P. System got new scale, $5 per month increase.

Conductors of the C. P. R. received increase.

Conductors of M. C. R. received increase.

Conductors of Pere Marquette received increase.

Conductors of T. H. and B. R. received increase.

Corporation Labourers at Berlin obtained increase one cent per hour.

Corporation Labourers at Guelph had advance of $1.50 per week.

Corporation Labourers at Ottawa to the number of 800 had increase from $1.75 to $1.80, for a 9 hour day, and more for trench work.

Corporation Labourers at Paris received increase from $1.50 to $1.75 per day.

Corporation Labourers at Port Arthur received increase of 25c. per day.

Corporation Labourers at St. Catharines received increase of 30c. per day.

Electric wirers at Brantford had raise from 22½c. to 25c. per hour.

Electric wirers at Hamilton obtained an advance.

Firemen at Berlin had increase of $50 per annum.

Firemen at Stratford received an increase.

Foundrymen and Moulders in employ of Canada Foundry Co., paid by time, received voluntary increase of 5 per cent.

Foundrymen to the number of 160 at Waterloo obtained increase of one cent per hour.

Freight handlers of G. T. R. at Niagara Falls had advance of 2c. per hour.

Freighthandlers of T. H. and B. R. had increase of one cent. per hour.

Freighthandlers and car checkers of the C. P. R. at Toronto to the number of 250, had wages increased from 14c. and 15c. per hour to 15c. and 16c.

Hotel Waitresses at Ottawa received increase of $3 and $4 per month.

Ironworkers, machinists and their helpers to the number of 450 at Toronto received increase of 5 per cent.

Labourers of Iron and Steel Co. at Hamilton obtained increases of 5 and 10 per cent.

Lathers in Toronto to the number of 120 received increases of $1 and $2 per week.

Leather workers at Lindsay received a voluntary advance of 10 and 15 per cent.

Leather workers at Ottawa to the number of 72 received an increase.

Locomotive Engineers of the C. P. R. received a 10 per cent. increase.

Locomotive Engineers of the M. C. R. received an increase from Feb. 1.

Locomotive Engineers of the Pere Marquette received increase from Feb. 1.

Locomotive Firemen of M. C. R. received an increase.

Locomotive Firemen of the Pere Marquette R. received an increase.

Lumberman in camps in the Ottawa Valley received $4 per month more than previous year.

Maintenance of Way employees of M. C. R. received an increase of 15c. per day.

Metal Polishers to the number of 96 at Toronto, obtained increase of 25c. per ton.

Moulders at Brantford, to the number of 25, had their wages increased from Dec. 1, 1909.

Moulders at Ottawa to the number of 30, obtained an increase of 25c. per day.

Moulders at Peterborough to the number of 39, had wages advanced from $2.36¼ to $2.75.

Moulders, blacksmiths, etc., at Waterloo, had voluntary increase of 1c. per hour from Waterloo Manufacturing Co.

Painters and Decorators in Toronto to the number of 1,000 obtained increase from 30c. to 35c. per hour, minimum rate.

Pattern makers at Brantford obtained increase of 5 per cent.

Pattern makers at Peterborough had wages raised from 27½c. to 30c. per hour.

Pattern makers at Port Hope obtained advance from 27½c. per hour to 30c.

Plasterers at Brantford had increase from 30c. to 35c.

Plasterers at Ottawa had an increase from 40c. to 42½c. per hour.

Plumbers to the number of 150 at Ottawa obtained an increase from 36c. to 39c. per hour, and 8 hour day during half year.

Pressmen to the number of 48 and assistants to the number of 80 at Ottawa, made an agreement for five years with new scale from $2.50 per week better than old scale.

Painters at Berlin secured n 8-hour day and time and a-half for overtime.

Printers at Chatham to the number of 92 obtained decrease from 9 to 8 hours and time and a-half for overtime.

Printers at London to the number of 70, obtained an increase of $1 per week.

Printers at Peterborough to the number of 45 had their wages increased by 50c. to $1.50 per week.

Printers at St. Catharines receive an increase.

Printers at Woodstock had their hours reduced from 53 to 48.

Railway truckers and checkers of G. T. R. at Brantford raised from 14½c. to 15c. per hour.

Saw-mill hands at Ottawa receive increase of 10c. per day.

Sheet metal workers at Hamilton to the number of 100 had wages raised from 25c. to 32½c. per hour.

Sheet metal workers at Ottawa to the number of 63 received increase from 27c. to 30c. per hour.

Sheet metal workers to the number of 370 at Toronto, received increases, inside men to 31½c., outside 33c.

Stationary Engineers employed by City of Ottawa received increase of $[illegible] per month.

Stokers at Ottawa gasworks were advanced from $15 to $16 per week of 77 hours.

Stove plate mounters at Ottawa to the number of 30, obtained increase of 25c. per day.

Street Railway employees at Fort William and Port Arthur received increases.

Street Railway employees at London had wages increased 1c. and 2c. per hour.

Street Railway employees at Ottawa had increases of ½c. and 1½c. per hour.

Street Railway employees to the number of 35 at St. Thomas received increase of 1c. per hour and hours reduced from 60 to 54.

Street Railway employees in Toronto had increase of about 5 per cent.

Tailors (Custom) at Hamilton to the number of 50 received 12½c. increase.

Tailors at St. Catharines to the number of 40 obtained an increase of 10 per cent. from May 1.

Tanners at Huntsville and Bracebridge to the number of 450 received advances from 10 to 15 per cent.

Teamsters of City of Ottawa to the number of 35 received increase from $4.32 to $4.50 for 9 hour day for man and horses, and carters to the number of 100 from $2.25 to $2.50.

Telegraphers on C. N. R. between North Bay and Cochrane to the number of 45 had wages increased.

Telegraphers on middle division of G. T. R. received increases of $5 and $10 per month.

Tilelayers at Toronto (45) had wages raised from 35c. to 40c. per hour, and improvers (15) from 25c. to 30c.

Trackmen of the G. T. R. at Niagara Falls received increase of 10c. per day.

Trackmen and yardmen of T. and N. O. R. obtained increases.

Trainmen of the C. P. R. received increase.

Trainmen of the M. C. R. received increase.

Trainmen of Pere Marquette received increase.

Trainmen of T. H. and B. R. received increase.

Upholsterers to the number of 70, at Toronto, obtained 10 per cent. increase to 35c. per hour.

AMERICAN FEDERATION OF LABOUR.

Mr. Frank Morrison, Secretary of the American Federation of Labour, in his thirtieth report, presented at the annual convention of that body held at St. Louis, Missouri, gives statistics for the past year. These figures are of interest to wage earners and others of Ontario, as showing the movements, changes of wages, hours of labour, benefits distributed, etc., by the International Trades and Labour Unions of the United States and Canada.

Mr. Morrison says:—

CHARTERS—Reports from the Secretaries of 106 of our National and International organizations furnish us with the information that 2,194 charters have been issued during the past year and 1,513 surrendered—1,347 of the charters surrendered were locals of the National and International unions and 166 affiliated direct with the American Federation of Labour.

GAIN IN MEMBERSHIP—The gain in membership reported by the Secretaries of 62 International organizations over the membership on the first of September last year is 218,229.

STRIKES—Reports from 80 International organizations and from a number of local unions show that there were 827 strikes in which there were 341,448 involved. Of that number 502,996 were benefited and 12,309 not benefited. The total cost of the strikes reported on was $3,727,277.68. Adding to that amount the donations made by local unions to other unions, we have a grand total of $3,860,994 expended to sustain members on strike during the past year.

The following tables are from Mr. Morrison's report:—

CHARTERS, MEMBERSHIP, STRIKES, ETC

Organizations.	Charters issued	Charters surrendered.	Gain in membership.	Number of strikes.	Strikes won.	Strikes compromised.	Strikes pending.	Strikes lost.	Reduction in hours per day.	Gain in wages.	Number involved.	Number benefited.	Not benefited.	Cost of strikes.	Donations to other unions.
A. F. of L. locals	248	166	1,980	23	13	3	3	4	.....	.....	413	265	121	$7,908 38	$4,800 80
Actors	.....	.....	.....	3	3	.....	.....	.....	.....	15 %	600	600	.....	.....	*m*
Asbestos Workers	6	.....	400	2	1	1	.....	.....	.....	25*c.**	100	80	20	.....	.....
Bakers	18	8	3,298	16	10	....	6	....	1	10%*	2,706	.....	.....	67,881 00	.....
Barbers	41	16	1,550	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....
Bill Posters	.....	.....	.....	1	1	....	....	....	.....	.....	.....	.....	.....	2,000 00	28 00
Blacksmiths	35	11	1,200	5	1	2	3	....	1 hour	8 %	110	3,000	.....	4,500 00	.....
Boilermakers	76	42	6,485	39	11	5	23	....	.....	10*c.**	1,427	693	.....	48,469 89	.....
Bookbinders	10	1	.....	5	....	....	5	....	.....	.....	350	.....	.....	22,470 75	.....
Boot and Shoe Workers	7	7	6,000	9	7	....	1	1	.....	.....	576	546	30	7,432 92	15,000 00
Brewery Workmen	48*n*	40*o*	5,000	32	19	7	2	4	.....	.....	2,785	.....	.....	51,001 00	3,725 00
Brick, Tile and Terra Cotta Wkrs.	18	15	.....	13*a*	....	1	4	8	.....	8%*b*	1,864	.....	.....	3,000 00	.....
Bridge and Structural Iron Wkrs.	7	2	1,100	6	3	2	1	....	.....	50*c.d*	1,500	1,500	.....	5,000 00	.....
Broommakers	1	1	100	5	3	....	2	....	1	40*c.*	100	100	.....	370 00	500 00
Brushmakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00
Carpenters, Brotherhood	201	271	20,968	60	30	20	8	2	1	25*c.*	.....	.....	.....	63,537 20	.....
Carpenters, Amalgamated	12	5	550	.....	....	....	....	....	.....	.....	.....	.....	.....	3,149 79	2,050 00
Carriage and Wagon Workers	.....	1	.....	.....	.....	.....	.....	.....	1	25*c.**	.....	600	.....	.....	.....
Carvers, Wood	.....	1	.....	4	3	....	1	....	.....	*c*	100	320	.....	1,574 36	.....
Cement Workers	27	9	.....	1	1	....	....	....	.....	25c*	500	500	.....	.....	.....
Chainmakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	10%*	.....	200	.....	.....	100 00
Cigarmakers	7	7	4,250	53	22	4	24	3	.....	.....	6,548	2,212	170	19,000 00	.....
Clerks	54	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cloth Hat and Cap Makers	5	2	507	42	35	....	....	7	.....	.....	769	672	97	11,572 00	.....
Commercial Telegraphers	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	125 00
Coopers	4	3	100	20	12	3	2	3	*p*	25c*	425	334	.....	3,050 00	.....
Curtain Operatives, Lace	1	.....	87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,247 00	.....
Cutting Die and Cutter Makers	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Electrical Workers	37	.....	4,000	6	6	....	....	....	.....	25*c.**	5,000	5,000	.....	30,000 00	25,000 00
Elevator Constructors	3	.....	104	2	1	....	1	....	*r*	50*c.**	510	350	160	9,000 40	.....
Engineers, Steam	41	47	.....	13	6	1	5	1	.....	.....	.....	.....	.....	6,880 75	.....
Engravers, Watch Case	.....	.....	.....	1	1	...	....	....	.....	.....	15	.....	.....	.....	59 00
Firemen, Stationary	19	1	.....	5	4	....	1	....	40	10%*	260	.....	.....	3,246 00	2,500 00

Fitters, Steam	15			4	2	1	1			50c.*	1,250			2,500 00		
Flour and Cereal Mill Employees	5	9		1	1					25c.*	28	28				
Foundry Employees		2		1			1				87					148 00
Freight Handlers	23	4	2,046	4	3			1		18½c.*	200	6,682	170			3,000 00
Fur Workers	1	1	58													
Garment Workers, United	87	39	17,634	9	4	1	2	2	1		20,000	20,000	5,000	50,000 00		
Garment Workers, Ladies	21	10	66,235	6	2	2		2	1	50c.*	79,700	75,000	4,700	383,000 00		6,120 00
Glass Bottle Blowers	3		350													3,500 00
Glass Workers, Amal	11	3	258	2	1	1			1 hour	5%*	60	60		200 00		100 00
Glove Workers	3	4	80	1		1	1				18	18				
Granite Cutters	20	9		8	8					3c.†	4,000	4,000		193,635 90		4,450 00
Hatters								s						195,854 50		1,700 00
Hodcarriers	89	25	5,400	22	20		1	1	1	25 to 62c.*	6,000			600 00		125 00
Horseshoers	9															5,000 00
Hotel and Restaurant Employes	82	88	2,156	16	12	1	3				3,500	4,500		25,298 75		19,377 64
Iron and Steel Workers	13	22		5			1	4		3½ to 10%j	5,000			257,426 25		180 00
Jewelry Workers	2	5	181													38 00
Lathers	40	12		5			5				500					
Laundry Workers	15	20q		1	1					10%*	40	40				
Leather Workers on Horse Goods	7	23		k	l					5%	3,000	3,800	450	47,210 00		
Leather Workers, Amal	6															
Lithographers	2		370													
Lithographic Press Feeders				3	3					$1 p. wk.	40	250		100 00		
Longshoremen	44	4	5,000	3	2			1		12c.*	2,800	2,400	400			250 00
Machine Printers and Color Mixers		1	3													
Machinists	51	20	10,000	50	25	2	23		1 hour	30c.*	18,000	25,000		198,226 29		
Marble Workers	10	3	600	5	2	2		1			500	l		2,500 00		6,000 00
Meat Cutters	38	27		2	1		1			50c.*	170	600		6,000 00		3,000 00
Metal Polishers	31	10	3,000	18	10	6	1	1			400	300	100	7,512 92		1,200 00
Metal Workers, Sheet	55	9	1,000	25	16	5	3	1		25c.*	2,800	5,000		18,250 00		3,000 00
Mine Workers, United	143	141		10		7	3			6%	100,000	300,000		1,326,310 63		
Molders	17	12					40							205,003 14		
Musicians	42	14	1,200	1			1				100					
Painters	83		6,658													5,000 00
Papermakers	17	5	11,000	1	1					5%	5,000	10,000				
Patternmakers	2	1	1,079	20	8	1	9	2			628	417	26	11,621 00		
Paving Cutters	12	5	400	4	3			1		6%	160	100	60	3,353 00		950 00
Photo-Engravers	6	1	353	5	3	1	1							3,268 00		
Piano and Organ Workers	7	4		1	1					10%*	96	96		24 00		650 00
Plate Printers				h			1				8			800 00		
Plumbers	60	45		65	40		25		1 hour.	$1.48¾*	1,500			29,707 00		
Potters	1	1	71	1			1				24			300 00		1,800 00

CHARTERS, MEMBERSHIP, STRIKES, ETC.—*Continued.*

Organizations.	Charters issued.	Charters surrendered.	Gain in membership.	Number of strikes.	Strikes won.	Strikes compromised.	Strikes pending.	Strikes lost.	Reduction in hours per day.	Gain in wages.	Number involved.	Number benefited.	Not benefited.	Cost of strikes.	Donations to other unions.
Powder & High Explosive Workers	1	.....	25	1	....	....	1	....	.....	5 to 20%*	25	150	75	.....	$29 00
Print Cutters	.....	.....	.....	.....	....	....	....	....	½ hr	.....	.....	437	.....	.....	350 50
Printing Pressmen	23	4	1,328	22	10	....	12	....	.....	10%	228	1,200	228	$90,000 00	466 55
Pulp and Sulphite Workers	7	9	1,800	2	2	....	....	....	.....	15c.*	6,000	10,000	.....	9,000 00	1,000 00
Quarry Workers	6	2	300	1	1	....	....	....	.....	8c.*	65	65	.....	883 00	.....
Railway Carmen	85	37	5,792	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....
Railway Employees, St. and Elec	23	4	3,000	12	8	....	3	1	.....	2c.†	7,500	7,200	300	67,640 80	4,755 18
Roofers, Composition	6	2	200	3	2	1	....	....	.....	35c.*	85	85	.....	500 00	650 00
Sawsmiths	1	.....	.....	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	100 00
Seamen	.....	.....	.....	1	....	....	1	....	.....	.....	8,000	.....	.....	.....	.....
Shingle Weavers	4	3	.....	3	1	....	2	....	.....	.....	300	.....	.....	5,500 00	.....
Shipwrights	.....	4	.....	2	....	....	2	....	.....	.....	300	.....	.....	.....	.....
Slate and Tile Roofers	3	.....	130	2	2	....	....	....	.....	50c.*	90	90	.....	.....	.....
Slate Workers	.....	2	.....	2	1	....	1	....	.....	.....	300	300	.....	5,000 00	.....
Spinners	2	1	.....	1	....	....	....	1	*u*	.....	100	1,500	.....	1,000 00	1,200 00
Stage Employes	40	.....	1,500	5	5	2	3	....	.....	25%*	600	600	.....	.....	1,000 00
Steel Plate Transferrers	.....	.....	.....	.....	....	....	....	....	.....	5%*e*	.....	.....	.....	.....	.....
Stereotypers and Electrotypers	7	.....	243	1	1	....	....	....	.....	.....	3	.....	.....	30 00	.....
Stonecutters	22	3	2,000	5	4	....	1	....	*f*	50c. to $1*	300	2,500	.....	52,500 00	1,000 00
Stove Mounters	5	5	104	7	2	....	4	....	.....	.....	150	70	.....	729 85	.....
Switchmen	10	17	471	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....
Tailors	8	23	.....	20	12	....	3	5	.....	.....	706	588	118	6,580 00	361 65
Teamsters	90	67	4,035	48	44	....	3	1	.....	.....	2,150	1,780	65	18,725 00	.....
Textile Workers	37	11	.....	2	1	....	....	1	.....	.....	70	.....	.....	5,000 00	.....
Tile Layers	1	.....	200	5	4	1	....	....	.....	20%*	275	275	.....	1,000 00	500 00
Tin Plate Workers	.....	.....	.....	1	....	....	....	1	.....	.....	2,000	.....	.....	40,000 00	.....
Tip Printers	.....	.....	50	.....	....	....	....	....	½ hr.	.....	.....	60	.....	.....	.....
Tobacco Workers	.....	3	.....	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	1,600 00
Travelers' Goods and Leather Novelty Workers	5	.....	218	1	1	....	....	....	1 hr.	10%*	32	32	.....	150 00	72 00

Tunnel and Subway Constructors ..	1	.....	1,000	.....	.....	.....	.....	.....	2 hrs.	$1*	.....	600	.....	.....	.....	900 00
Typographical Union.....	52	21	4,991	15	6	....	7	2	.....	.....	202	122	19	78,046 21	.....	
Weavers, Elastic Goring.....	.....	.....	1	.....	....	....	....	....	1 hr.	.....	.....	79	.....	.....	.....	5 00
Weavers, Wire.....	.....	.....	.....	.....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	200 00
Totals.....	2,442	1,513	220,209	827	470	84	259	62	.....	.....	341,448	502996	12,309	$3,727,277 68	$133,716 32	

a 8 were lockouts; *b* in Chicago district; *c* Minneapolis 40 cents per day, Detroit 30 cents per day, New York City 25 cents per day; *d* 30 local unions have secured increases in wages since January, 1910; *e* gained without strike; *f* half-holiday Saturday; *h* lockout; *i* in one city; *j* for 4,000 men; *k* general strike for eight-hour day; *l* strike for eight-hour day won in 4 cities and in 65 cities compromised in a settlement for 9 hours; *m* in cash and theatrical benefits, $10,000; *n* 18 local and 30 branch charters; *o* 28 locals and 12 branch charters; *p* some places 2 hours, other places 1 hour; *q* 12 locals transferred to United Garment Workers; *r* 4 hours less per week; *s* lock-out of January, 1909, pending in 7 factories; *t* nearly all; *u* 2 hours per week; *v* per week.

* Per day. † An hour.

BENEFITS PAID TO MEMBERS BY INTERNATIONAL ORGANIZATIONS DURING THE PAST YEAR.

Organizations.	Death benefits	Death benefits members' wives.	Sick benefits.	Traveling benefits.	Tool insurance.	Unemployed benefits.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Asbestos Workers						
Bakers	2,700 00	525 00	11,656 65			
Barbers	22,445 00		40,111 32			
Boilermakers	3,100 00					
Bookbinders	3,750 00					
Boot and Shoe Workers	14,500 00		69,522 05			
Brick, Tile & Terra Cotta Workers	300 00					
Bridge and Structural Iron Workers	11,200 00					
Broom Makers	825 00		500 00			
Brushmakers	50 00			15 00		
Carpenters, Brotherhood.	250,001 77	33,550 00	90,000 00			
Carpenters, Amalgamated	2,054 50		7,755 56	184 55	4,158 17	31,810 95
Carriage & Wagon Workers	750 00					
Carvers, Wood	2,650 00				139 09	
Cigarmakers	226,000 00	4,800 00	186,000 00	41,000 00		76,000 00
Clerks	7,400 00		16,720 00			
Commercial Telegraphers	1,200 00					
Coopers	2,776 50					
Curtain Operatives, Lace.	4,025 00	250 00				
Cutting Die & Cuttermkrs.	375 00					
Electrical Workers	8,400 00					
Engravers, Watch Case			39 00			
Fitters, Steam	2,000 00					
Foundry Employes	400 00		975 00			
Freight Handlers	3,110 00	1,000 00	1,000 00		23 00	
Garment Workers, Ladies'	150 00					
Glass Bottle Blowers	55,000 00					40,000 00
Glass Workers, Amalg'm'd	602 00					
Hatters	75,000 00	1,000 00				4,000 00
Hodcarriers	4,100 00					
Hotel and Rest. Emp.	44,900 00		67,571 22			
Iron and Steel Workers	2,700 00	1,500 00	10,655 00			
Jewelry Workers			134 00			
Lathers	4,461 80					
Leather Wks. on Horse Gds.	2,000 00		6,428 00			
Lithographers	12,500 00					
Lithographic Pressfeeders	300 00					
Machine Printers and Col. Mix	600 00					
Machinists	38,800 00					
Meat Cutters	1,800 00					
Metal Polishers	6,750 00					
Metal Workers, Sheet	11,600 00					
Moulders	58,532 00		135,464 10			
Painters	86,249 00	9,325 00	10,975 00			
Patternmakers	3,200 00		6,927 79		2,625 15	
Paving Cutters	1,900 00					
Photo-Engravers	1,875 00		4,023 05			
Piano and Organ Workers	2,000 00	1,080 00	3,938 52			900 00
Plumbers	10,000 00					600 00
Potters	300 00					
Print Cutters	675 25					
Printing Pressmen	17,100 00					
Pulp & Sulphite Workers						3,000 00
Quarry Workers	750 00					
Railroad Telegraphers	85,800 00					

BENEFITS PAID TO MEMBERS BY INTERNATIONAL ORGANIZATIONS DURING THE PAST YEAR.—*Concluded.*

Organizations.—*Concluded*	Death benefits.	Death benefits members' wives.	Sick benefits.	Traveling benefits.	Total insurance.	Unemployed benefits.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Railway Carmen	3,749 60					24,553 05*
Railway Emp. St. & Elec.	20,900 00		19,777 85			
Sawsmiths			500 00			
Shipwrights	1,900 00					
Slate and Tile Roofers	800 00			300 00		
Spinners	1,500 00		600 00			16,000 00
Stereotypers & Electrot'rs	2,400 00					
Stonecutters	1,800 00					
Stove Mounters	1,700 00					
Switchmen	128,550 00					
Tailors	10,412 50		21,820 55			
Textile Workers	70 00					
Tobacco Workers	1,250 00		5,271 00			
Travelers' Goods & Lea. Novelty Workers	350 00	462 00				
Tunnel and Subway Con.	1,200 00		600 00	1,500 00		800 00
Typographical Union	43,045 00					
Weavers, Elastic Goring	300 00					144 00
Weavers, Wire	1,056 60		200 00			
Totals	1,320,664 52	53,492 00	719,165 66	42,999 55	6,945 41	197,808 00

*Paying off strike benefits for which the organization was indebted prior to September 1st, 1909.

AVERAGE PAID UP MEMBERSHIP.

Year.	No.
1897	264,825
1898	278,016
1899	349,422
1900	548,321
1901	787,537
1902	1,024,399
1903	1,465,800
1904	1,676,200
1905	1,494,300
1906	1,454,200
1907	1,538,970
1908	1,586,885
1909	1,482,872
1910	1,562,112

THE LAWS RELATING TO LABOUR—CHRONOLOGY OF ONTARIO LABOUR LAWS.

Apprentices' and Minors' Act. Passed, 1871. Amended, 1874. Cap. 161, R.S.O. 1897.

Mechanics' and Wage-earners' Liens, Passed, 1873. Amended, 1874, 1878, 1882, 1884, 1887, 1890, 1896, 1897. Cap. 153, R.S.O., 1897, 1901, 1902, 1904. Consolidated and amended 1910. Previous Act repealed.

Master and Servant Act. Passed, 1873. Amended, 1886. Cap. 157, R.S.O., 1897, 1901, 1904, 1908. Consolidated and amended 1910. Previous Act repealed

Immigration Aid Societies Act. Passed, 1873. Cap. 212, R.S.O., 1897, 1904, repealed 1905.

Act to Facilitate the Adjustment of Disputes between Masters and Workmen. Passed, 1873. Cap. 159, R.S.O., 1897.

Act Respecting Innkeepers. Passed, 1874. Amended, 1882. Cap. 187, R.S.O., 1897, 1904, 1907.

Act Respecting Public Meetings, Cap. 230, R.S.O. 1897.

Act Respecting Threshing Machines. Passed, 1874. Cap. 265, R.S.O., 1897.

Act Respecting Co-operative Associations. Passed, 1880. Amended, 1884. Cap. 202, R.S.O., 1897, 1904, 1905, repealed 1907 (see Companies' Act).

Act Respecting Safety of Railway Employees. Passed, 1881. Cap. 207, R.S.O., 1897.

Act Respecting Accidents to Employees on Railways. Passed, 1881. Cap. 266, R.S.O., 1897.

Bureau of Industries. Established, 1882.

Act Respecting Pawnbrokers. Passed 1884. Cap. 188, R.S.O., 1897, 1907.

Factories Act. Passed, 1884 Amended, 1887, 1889, 1895. Cap. 246, R.S.O., 1897. Further amended, 1901, 1902, 1903, 1904, 1905, 1908.

Act Respecting Wages. Passed, 1888. Cap. 156, R.S.O., 1897, 1899. Consolidated and amended 1910. Previous Act repealed.

Workmen's Compensation for Injuries Act. Passed, 1886. Amended, 1887, 1893, 1896, 1899. Cap. 160, R.S.O., 1897.

Lord's Day Observance Act. Passed, 1885. Cap. 246, R.S.O., 1897, 1903, 1904.

Shops Regulation Act. Passed, 1888. Amended, 1889-1897. Cap. 257, R.S.O., 1897. Further amended, 1900, 1901, 1903, 1904, 1908

Egress from Public Buildings Act. Passed, 1888. Cap. 263, R.S.O., 1897.

Trades Disputes Act. Passed, 1890. Amended, 1894, 1897. Cap. 158, R.S.O., 1897. Further amended, 1902. Consolidated and amended 1910. Previous Act repealed.

Woodmen's Lien Act. Passed, 1891. Amended, 1894, 1896, 1897, 1899. Cap. 154, R.S.O., 1897, 1903. Consolidated and amended 1910. Previous Act repealed.

Act Respecting Stationary Engineers. Passed, 1891. Cap. 185, R.S.O., 1897, 1906, 1907, 1908, 1909.

Mines' Act. Passed, 1892. Cap. 36, R.S.O., 1897, 1905, repealed 1906.

Matters under Municipal Act. 1892, 1893, 1894, 1895, 1898. Cap. 223, R.S.O., 1897, 1904, 1905, 1906.

Insurance by Trade Unions. Passed, 1892. Amended, 1897. Cap. 203, R.S.O., 1897.

Act Respecting School for Artisans. Passed, 1892. Amended, 1895. Cap. 223, R.S.O., 1897.

Act Respecting Truancy and Compulsory School Attendance. R.S.O., Cap. 196, 1897. Amended, 1904. New revised Act repealing this, 1909.

Act Respecting Lien for Wages on Street Railways. Passed, 1895. Cap. 208, R.S.O., 1897, 1906. (See Railway Act.)

Labour on Public Works. Passed, 1896. Amended, 1897. Cap. 155, R.S.O., 1897, 1900. Consolidated and Amended 1910. Previous Act repealed.

Act Respecting Liability of Directors' Companies for Wages. Passed, 1896. Sec. 85, Cap. 191, R.S.O., 1897. Repealed, 1907. (See Companies' Act.)

Act Respecting Liability of Mining Companies for Wages. Passed, 1896. Cap. 197, R.S.O., 1897, 1906. (See Mines Act.)

Act Respecting Technical Schools. Passed, 1897.

Act Respecting Immigration of Children. Passed, 1897. Cap. 262, R.S.O., 1897.

Resolution Respecting Fair Wages on Public Works. Passed, 1900.

Act Creating Bureau of Labor. Passed, 1900. Revised 1910. (See below.)

Act Respecting Mines. Passed, 1906, 1908, 1909.

Act Respecting Steam, Electric and Street Railways. Passed 1906.

Act for Appointment of Railway and Municipal Board. (Trade Disputes provisions.) Passed, 1906. Amended, 1907.

Act Respecting Joint Stock and Other Companies. Passed, 1907.

Act Respecting the Manufacture and Sale of Bread. Passed, 1908.

An Act Respecting the Bureau of Labour.

S.O. 1910, Cap. 13. *Assented to 7th March,* 1910.

His Majesty by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as the Bureau of Labour Act.

2. There shall be attached to the Department of the Commissioner of Public Works a bureau, to be styled "The Bureau of Labour."

3. The Lieutenant-Governor may appoint a Secretary of the said Bureau and may also appoint such other officers as may be necessary for the proper conduct of the Bureau.

4. It shall be the duty of the Bureau to collect, assort and systematize and publish information and statistics relating to employment, wages and hours of labour throughout the Province—co-operation, strikes, lock-outs or other labour difficulties, trades unions, labour organizations, the relations between labour and capital, and other subjects of interest to working men, with such information relating to the commercial, industrial, and sanitary condition of working men, and the permanent prosperity of the industries of the Province, as the Bureau may be able to gather.

5. Chapter 14 of the Acts passed in the sixty-third year of Her Late Majesty's reign is repealed.

LABOUR LEGISLATION.

ONTARIO.

Mechanics' Lien Act.

The Mechanics' and Wage-earners' Lien Act was revised and amended in the session of 1910, R. S. O., c. 153, and amending acts being repealed. The principal new provisions were as follows:—Material actually brought upon any land to be used in connection with such land for building purposes shall be subject to a lien in favour of the person furnishing it until placed in the building, erection or work, and shall not be subject to execution or other process to enforce any debt other than for the purchase thereof, due by the persons furnishing the same; when any promissory note or bill of exchange, given in acknowledgment of the lien or to postpone payment, has been negotiated, the lien-holder shall not thereby lose his lien, if at the time of bringing his action to enforce it, or where an action is brought by another lien-owner, he is at the time of proving his claim in such action the holder of such promissory note, the time limited for bringing the action to enforce the lien not being extended; when property subject to a lien is sold in an action to enforce a lien, every lien-holder shall be entitled to share in the proceeds of the sale in respect to the amount then owing him, although the same or part thereof was not payable at the time of the commencement of the action, or is not then presently payable.

Woodman's Lien for Wages.

The Woodman's Lien for Wages Act was revised without important amendment, R.S.O., c. 154, and amending acts being repealed.

Public Works Wages Act.

The Act to secure payment of wages for labour performed in the Construction of Public Works was revised without important amendment, R.S.O., c. 155, and amending acts being repealed.

Wages Act.

The Wages Act was revised without important amendment, R.S.O., c. 156 and amending act being repealed.

Master and Servant Act.

The Master and Servant Act was revised with one important amendment, R.S. O., c. 157 and amending acts being repealed.

The Trade Disputes Act.

The Act respecting Councils of conciliation and of arbitration for settling Industrial Disputes was revised without important amendment, R.S.O., c., 158 and amending Acts being repealed.

BUREAU OF LABOUR.

The Act respecting the Bureau of Labour was revised with verbal amendments.

Industrial Schools.

The Industrial Schools Act was revised and amended. The principal new provisions were: That the Inspector by his order in writing may direct that a child who has been placed in a foster home under the provisions of the Children's Protection Act shall be sent to an industrial school; that every child sent to an industrial school shall when practicable be taken to the school by an agent or member of a Children's Aid Society, and the actual expense incurred in so doing shall be borne by the municipality liable for maintenance. R.S.O., c. 304 and amending acts were repealed.

NEW BRUNSWICK.

Labour Statistics.

The Act of 1904, providing for the establishment of a Bureau of Labour is amended by an addition requiring that the head of the Bureau shall be known in future as the "Commissioner of Labour." The Commissioner is given the power to appoint agents in the industrial centres of the Province, to assist in obtaining statistical information, "to consult with employers and employes in order to prevent or settle lockouts and strikes and to confer with factory inspectors as to their duties and the making up of their annual reports."

Government Annuities.

The property and interest of an annuitant, or of any person interested or entitled in or to any contract for an annuity, or an annuity itself, under the Government Annuities Act, 1908, is exempt from seizure, levy or attachment under the process of any New Brunswick Court and shall not be affected by any trust, charge or lien.

NOVA SCOTIA.

Compensation to Workmen.

The Employers' Liability Act of Nova Scotia was amended in a comprehensive manner, the provisions of the new law closely following those of the British Act of 1897. The employers' liability was considerably increased, the doctrines of common employment and contributory negligence being practically abolished.

Women in Factories.

The prohibition enacted in 1909, making it unlawful for women to be employed in a factory for more than 9 hours in any one day, was removed.

Co-operation.

The Act passed in 1905, which provided machinery for the organization of fishermen's unions, was amended by the addition of clauses giving permission to members of a station of the Fishermen's Union, not less than 10 in number, to

form themselves into a co-operative association for the buying, selling or packing of fish, fish products of all kinds, fishing gear for the use of members, real estate or vessels for the use of the association. The clauses also deal with capital stock, administration, officers, by-laws, etc.

Coal Mining.

The clauses of the Coal Mines Regulation Act relating to inspection were revised, the powers of the Inspector being extended to Deputy Inspectors. An owner, agent or manager of a mine must keep at his office at the mine an accurate plan showing the workings of the mine up to 3 months or less previously, instead of 6 months. The rules as to the use of explosives were also amended so as to provide greater safety.

Dominion Annuities.

By special act annuities under the Dominion Government Annuities Act of 1908 were declared exempt from seizure or attachment and unaffected by trust or lien.

QUEBEC.

Free Employment Bureaus.

The establishment and maintenance of employment bureaus in cities and towns were authorized last session by special statute. The control of such bureaus is vested in the Minister of Public Works and Labour. Each bureau is to have a separate superintendent, who is to receive a salary of not more than $1,000 a year, and who is to report annually when required to do so. The engaging of the necessary subordinate employees is also provided for. The purpose of the bureaus is to enable workmen who are British subjects or born in Canada, and who reside in the Province, to register their names free of charge; employers requiring the services of workmen may also register applications free of charge; and the two will in this way be brought together. Bureaus under the control of private persons must be licensed and held subject to inspection by the Factory Inspectors, and must report as required by the Minister of Public Works and Labour, under a penalty of $50. The term "workman" includes every person who does manual labour and who is included in the class of persons named by the order in council creating a bureau.

Child and Female Labour.

The employment of any boy or girl less than 16 years of age who is unable to read and write fluently is now prohibited. An inspector may require children of 16 years of age to undergo examination, and may dismiss them if they fail to pass. He may also require a birth certificate. The employment is prohibited of any child less than 15 years of age to act or sing in a theatre, hall for moving pictures, etc., except in educational institutions or in entertainments for charitable purposes. An important addition to the law in this connection has reference specifically to cotton and woollen factories. The working hours of children and women are limited to 10 per day in these establishments and to 58 per week, though an apportionment of working hours for the purpose of giving a shorter day's work on Saturdays is permitted. An hour must be allowed each day for meals and must not be counted as part of the hours of employment. The "day" mentioned above is not to begin before 6.30 a.m, nor end after 6.30 p.m., and in no case is to exceed 10½ hours.

Co-operation.

Agricultural societies and farmers' clubs have been given permission with the sanction of the Minister of Agriculture to take shares in co-operative agricultural associations. Societies for the manufacture of dairy products may also become members of a co-operative association. Moreover, a co-operative agricultural association may become a member of any similar association, but is not permitted to subscribe more than one share. Any director of a farmers' club, agricultural society, etc., who is a member of a co-operative association, is eligible for appointment as a director of such co-operative association. The president or vice-president of an agricultural association may represent his association at general meetings of the shareholders of co-operative associations, and may vote in the name of the association which he represents.

Forestry Education.

A grant of $4,000 for the school year of 1910-11 and a sum of $5,000 for each subsequent school year are authorized to *Le Syndicat Financier de l'Université Laval,* to aid in the establishment and maintenance of forestry education in the Province "of a nature to train men competent to assume the control and management of forests belonging to the Crown or to private persons."

Model Homes.

Under an Act authorizing the appointment of a commission to consider the best means of establishing a system of parks on the Island of Montreal and the Ile Jesus, a portion of the duties of the commission is defined as to prepare plans and devise the best means for securing areas for model homes for workingmen.

Licensing Cheese Factories.

The Act respecting the manufacture of dairy products is amended by the addition of a section providing for the inspection of butter and cheese factories, the licensing of the same, and the closing of unsanitary establishments.

Government Annuities Protected.

The property and interest of an annuitant in a contract for an annuity under the Dominion statute and its amendments is declared to be unassignable and not subject to seizure, except as provided by legislation of the Dominion.

SASKATCHEWAN.

Factories Act.

The Factories Act of this year forbids the employment of children under age of 14 in factories, and the employment of youths between the ages of 14 and 16, and of young girls between the ages of 14 and 18, in dangerous and unwholesome establishments, a list of which is given in a schedule. Hours of labour for women, young girls and youths are limited to 8 in any one day and to 45 in any one week. The usual exemptions are granted to these provisions. The Act also contains extensive provisions for the ensuring of the safety of employees, sanitary conditions, the prevention of fires, etc. One or more inspectors, male or female, are to be appointed, the powers and duties of these offices being defined in full. The Act

had an extended section devoted to offences and penalties. An annual report of the working of the Act must be laid before the Legislative Assembly within 21 days after the commencement of each session.

Government Annuities.

The property or interest of any person in an annuity under the Dominion Government Annuities Act, 1908, is made exempt from seizure or attachment under the process of any Court of Saskatchewan, and is not to be affected by any trust, charge or lien.

Bartenders' Licenses.

An amendment to the Liquor License Act requires a bartender to take out a license before accepting employment in his calling, under a penalty on the part of the employer of not less than $2 and not more than $10 for each day during which the offence is continued, or in default of payments to imprisonment for a period not exceeding one month. Licenses are to be issued only to persons of the full age of 21 years and of good character. No license may be issued to a female. A licensed bartender who violates the liquor law is liable to a penalty not exceeding $50. Provision is made for the temporary employment of unlicensed persons as bartenders.

Steam Boilers.

An amendment was made to the Steam Boilers Act relating to fees for examinations.

Children's Protection.

A number of amendments to the Children's Protection Act were enacted, making more stringent provision against interference with children under the protection of a Children's Aid Society, and other details.

LIST OF LABOUR BUREAUS AND WHEN ORGANIZED.

During the past forty years labour's interests have become so important a factor with representative Governments throughout the world that they deemed it necessary to create Labour Bureaus for the purpose of collecting accurate statistics of the progress of a nation's prosperity arising from commercial, mechanical and agricultural pursuits. The success of these undertakings has proved most satisfactory, as is shown by the following list of Labour Bureaus compiled from official records:—

Ontario.—The Bureau of Labour was created by an Act passed by the Ontario Legislature, April 25th, 1900, and amended in 1910. The Department is under the direction of Hon. J. O. Reaume, Minister of Public Works. The late John Armstrong, Secretary of the Labour Bureau, died November, 1910. Acting Secretary, E. J. Toker.

Canada.—The Department of Labour was established in July, 1900, and practically supersedes the Bureau of Labour of the Department of Agriculture,

established in 1890, with Mr. George Johnson as chief clerk. The Department is now a separate portfolio, with Hon. Wm. Lyon Mackenzie King, as Minister. The Act establishing the Department provides for the monthly issuing of a Labour Gazette, the editor of which is F. A. Acland, Deputy Minister of Labour. The first number of the Gazette was issued in September, 1900.

Great Britain.—The Labour Bureau of the Board of Trade was established March 2nd, 1886. In 1893 the service was greatly enlarged, and given its present name, "Board of Trade Labour Department." A. Wilson Fox, Chief Secretary. It publishes monthly The Labour Gazette; also annual reports.

New Zealand Department of Labour.—The Right Hon. J. A. Millar, Minister of Labour. E. Tregear, Secretary, Wellington, N.Z.

New South Wales.—Department of Labour and Industry. T. B. Clegg, Chief Clerk, Sydney, N.S.W.

Queensland.—Department of Immigration.—Government Labour Bureau and Relief. Chief Clerk, Brisbane, Queensland.

South Australia Labour Bureau.—Chief Clerk, A. C. H. Richardson, Adelaide, South Australia.

West Australia,—Government Statistician, Malcolm A. C. Fraser, Perth, West Australia.

United States Department of Labour.—Established as a Bureau of Labour, January 31st, 1885; made a Department of Labour, June 13th, 1888. Bi-monthly bulletins. Annual reports. Commissioner of Labour, Chas. P. Neill, Washington, D.C.

United States Census Office.—E. Dana Durand, Director of Census, Washington, D.C.

Massachusetts Bureau of Statistics of Labour.—Established June 23rd, 1869. Quarterly bulletins. Annual reports. Chief of the Bureau of Statistics of Labour, Ch. F. Gettemy, Boston, Mass.

Pennsylvania Bureau of Industrial Statistics.—Established April 12th, 1872. Annual reports. Chief of Bureau of Industrial Statistics, John L. Rockey, Harrisburg, Pa.

Connecticut Bureau of Labour Statistics.—Established July 12th, 1873. Abolished July 23rd, 1875. Re-established April 23rd, 1885. Annual reports. Commissioner of Labour, Wm. H. Scoville, Hartford, Conn.

Kentucky Bureau of Agriculture, Labour and Statistics.—First established March 20th, 1876, as a Bureau of Agriculture, Horticulture, and Statistics: the duties of the Bureau were enlarged and the present name adopted April 2nd, 1892. Biennial reports. Commissioner of Agriculture, Labour and Statistics, M. C. Rankin, Frankfort, Ky.

Missouri Bureau of Labour, Statistics and Inspection.—Established March 19th, 1879; enlarged March 23rd, 1883. Annual report. Commissioner of Labour, J. C. A. Hillier, Jefferson City, Mo.

Ohio Bureau of Labour Statistics.—Established May, 1887. Annual reports. Commissioner of Labour, C. H. Wirmel, Columbus, Ohio.

New Jersey Bureau of Statistics of Labour and Industries.—Established March 27th, 1878. Annual reports. Chief of the Bureau of the Statistics of Labour and Industries, W. C. Garrison, Trenton, N.J.

Illinois Bureau of Labour Statistics.—Established May 29th, 1879. Biennial reports. Secretary of the Bureau of Labour Statistics, David Ross, Springfield, Illinois.

Indiana Bureau of Statistics.—Established March 29th, 1879. Biennial reports. Chief of the Bureau of Statistics, J. L. Peetz, Indianapolis, Ind.

New York Bureau of Labour Statistics.—Established May 4th, 1883; created a Department of Labour, 1902. Commissioner of Labour, John Williams, Albany, N.Y. Quarterly bulletins. Annual reports.

California Bureau of Labour Statistics.—Established March 3rd, 1883. Biennial reports. Commissioner of Labour, J. D. McKenzie, San Francisco, Cal.

Michigan Bureau of Labour and Industrial Statistics.—Established June 6th, 1883. Annual reports. Commissioner of Labour, R. H. Fletcher, Lansing, Mich.

Wisconsin Bureau of Labour Statistics.—Established April 3rd, 1883. Biennial reports. Commissioner of Labour, J. D. Beck, Madison, Wis.

Iowa Bureau of Labour Statistics.—Established April 3rd, 1884. Biennial reports. Commissioner of Labour, E. W. VanDuyn, Des Moines, Iowa.

Maryland Bureau of Industries Statistics.—Established March 27th, 1884. Annual reports. Chief of the Bureau of Industries Statistics, Chas. J. Fox, Baltimore, Md.

Kansas Bureau of Labour Statistics.—Established March 5th, 1885. Annual reports. Commissioner of Labour, W. L. A. Johnson, Topeka, Kan.

Rhode Island Bureau of Labour Statistics.—Established March 29th, 1887. Annual reports. Commissioner of Labour, Geo. H. Webb, Providence, R.I.

Nebraska Bureau of Labour and Industrial Statistics.—Established March 31st, 1887. Biennial reports. The Governor, *ex-officio* Commissioner. Deputy Commissioner of Labour and Industrial Statistics, Will M. Maupin, Lincoln, Neb.

North Carolina Bureau of Labour Statistics.—Established February 28th, 1887. Annual reports. Commissioner of Labour, M. L. Shipman, Raleigh, N.C.

Maine Bureau of Labour Statistics.—Established March 7th, 1887. Annual reports. Commissioner of Labour, Thos. J. Lyons, Augusta, Me.

Minnesota Bureau of Labour.—Established as a Bureau of Labour Statistics, March 8th, 1887; enlarged and changed to the Bureau of Labour, April, 1893. Biennial reports. Commissioner of Labour, W. E. McEwen, St. Paul, Minn.

Oklahoma Department of Labour.—Established September, 1907. Commissioner of Labour, Charles L. Daugherty, Guthrie, Okla.

Colorado Bureau of Labour Statistics.—Established March 24th, 1887. Biennial reports. Commissioner of Labour, E. V. Brake, Denver, Col.

West Virginia Bureau of Labour.—Established February 22nd, 1889. Annual reports. Commissioner of Labour, I. V. Barton, Wheeling, W.Va.

North Dakota Department of Agriculture and Labour.—Established October 1st, 1890. Biennial reports. Commissioner of Labour, W. C. Gilbreath, Bismark, N.D.

Montana Bureau of Agriculture, Labour and Industry.—Established February 17th, 1893. Annual reports. Commissioner of Labour, J. A. Ferguson, Helena, Mont.

New Hampshire Bureau of Labour.—Established March 30th, 1893. Biennial report. Commissioner of Labour, Lysander H. Carroll, Concord, N.H.

Washington Bureau of Labour.—Established June 11th, 1897. Annual reports. Commissioner of Labour, C. F. Hubbard, Olympia, Wash.

Idaho Bureau of Labour and Mining Statistics.—Established March 11th, 1895. Annual reports. Commissioner of Labour, Jas. P. Fallon, Boise City, Idaho.

Virginia Bureau of Labour and Industrial Statistics.—Established March 3rd, 1898. Annual report. Commissioner of Labour, James B. Doherty, Richmond Va.

Louisiana Bureau of Statistics of Labour.—Established July 9th, 1900. Biennial reports. Commissioner of Labour, Jas. Byrnes, New Orleans, La.

Oregon Bureau of Labour Statistics and Inspection of Factories and Workshops.—Established June 3rd, 1903. Biennial reports. Commissioner of Labour and Inspector of Factories and Workshops, O. P. Hoff, Salem, Ore.

Tennessee Bureau of Labour, Mines and Mineral Department.—Established 1891. Commissioner of Labour, R. A. Shiflett, Nashville, Tenn.

South Carolina Department of Agriculture, Commerce, and Industry.—Re-organized 1909. Commissioner, E. J. Watson, Columbia, S. C.

Argentine Republic.—Francoise Latzina, Directeur General de la Statisque de la Republique Argentina (Ministere de l'Interieur), Buenos Ayres.

Austria-Hungary.—Commission Central of Statistics (Minister of Public Instruction). Dr. Karl Theodor von Inama Sternegg, President, Vienna. Department of Municipal Statistics, Dr. Sedlatzek, Chief, Vienna.

Bavaria.—Royal Bureau of Statistics (Department of Interior). Karl Rasp, Director, Munich.

Belgium.—Royal Bureau of General Statistics (Minister of the Department of the Interior and Public Instruction). Edmund Nicoali, Chief, Brussels.

Brazil.—Dr. R. Pompeia, Directeur de Bureau de Statistique des Estats Unis du Bresil (Ministere de l'Interieur), Rio Janeiro.

Bulgaria.—Bureau of Statistics of Bulgaria (Minister of Public Instruction). F. Ivanchoff, Director, Sophia.

Chili.—Don Francisco S. Asta Burnaga, Chef du Bureau Central de Statistique de Chili, Santiago.

Denmark.—Royal Bureau of Statistics (Minister of Finance). Marius de Gad, Director, Copenhagen.

France.—Office du Travail (Ministere du Commerce et de l'Industrie). C. Moron, Directeur, Paris.

Victor Furquan, Chef du Bureau de la Statistique General de France (Ministere du Commerce et de l'Industrie).—Office du Travail, Paris.

Germany.—Imperial Office of Statistics (Department of Interior). Dr. F. W. Hans Von Schell, Director, Berlin.

Herzegovina.—Bureau of Statistics of Bosnia and Herzegovina. Dr. Ferdinald Schmidt, Director, Sarajevo.

Holland.—Herr Methour, Director of Netherlands Statistical Central Office, La Haye, Netherlands.

Italy.—Directeur General de la Statistique du Royaume, G. Montemartini, Director dell' Offices del Lavoro (Ministere de l'Agriculture, de l'Industrie, et du Commerce), Rome.

Japan.—N. Hanabusa, Chef du Bureau General de la Statistique (Cabinet Imperial), Tokio.

Mexico.—Antonio Penafiel, Directeur General de la Statistique de la Republique (Mexicaine du Fomento), Mexico.

Paraguay.—I. Jasquet, Director General de la Statistique du Paraguay, Assumption.

Portugal.—Ernesto Madeira Pinto, Director General of Statistics of Commerce (Minister of Public Works, Commerce and Industries), Lisbon.

Prussia.—Royal Bureau of Statistics (Minister of the Department of the Interior). Karl Julius Emil Blenck, Director, Berlin.

Office of the Statistics of the City of Berlin. Dr. Richard Bockh, Director, Berlin.

Roumania.—C. E. Cupenski, Directeur de la Statistique General du Royaume (Minister de l'Agriculture, de l'Industrie, du Commerce, et des Domaines), Bucharest.

Russia.—Bureau, Directeur du Comite Central de Statistique (Ministere de l'Interieur), St. Petersburg.

B. Grigoreff, Chef du Bureau de la Statistique Municipale, Moscow.

Saxony.—Bureau of Statistics of the Minister of State. Dr. Victor Bohmert, Director, Dresden.

Spain.—Ing. Francisco de Paulo de Arrillaga, Director General of the Geographic Institute and Bureau of Statistics of Spain, Madrid.

Styria.—Bureau of Statistics of Styria. Dr. Ernest Michler, Director, Gratz.

Sweden.—Dr. Elis Sidenbaldh, Directeur en Chef du Bureau Central de Statistique de Royaume (Ministere de l'Interieur), Stockholm.

Norway.—Anders Nicolaikiser, Directeur du Bureau Central de Statistique du Royaume (Ministere de l'Interieur), Christiana.

Switzerland.—Dr. Louis Guillaume, Directeur du Bureau Federal de Statistique (Ministere de l'Interieur), Berne.

Stephen Bauer, Office International du Travail, Basle, Switzerland.

Uruguay.—Honore Roustan, Directeur du Bureau de la Statistique General, Montevideo.

LIST OF NATIONAL AND INTERNATIONAL LABOUR ORGANIZATIONS.

With Names and Addresses of General Secretaries, Having Subordinate Organizations in the Province of Ontario.

Trades and Labour Congress of Canada, P. M. Draper, Box 1017, Ottawa, Ont.

American Federation of Labour, Frank Morrison, 801-9 G Street, N.W., Washington, D.C.

Actors' National Protective Union, Lew Morton, 8 Union Square, New York, N.Y.

Allied Metal Mechanics' International Association, John E. Devlin, 421 Valentine Building, Toledo, Ohio.

Asbestos Workers of America, T. J. McNamara, 1725 Elliott Avenue, St. Louis, Mo.

Bakers' and Confectioners' International Journeymen, Otto E. Fischer, 212 Bush Temple of Music, Chicago, Ill.

Barbers' International Union, Journeymen, Jacob Fischer, Box 517, Indianapolis, Ind.

Bill Posters and Billers of America, W. McCarthy, 1493 Broadway, New York.

Brushmakers' International Union, R. M. Parks, 717 Washington Boulevard, Chicago, Ill.

Blacksmiths, International Brotherhood of, W. F. Kramer, Rooms 570-585 Monon Building, Chicago, Ill.

Blast Furnace Workers and Smelters of America, International Association, William J. Clarke, 128 Sandusky Street, Buffalo, N.Y.

Boilermakers and Iron Shipbuilders of America, W. J. Gilthorpe, Room 7. Law Building, Kansas City, Kansas.

Bookbinders, International Brotherhood of, J. W. Dougherty, Room 210, 132 Nassau Street, New York, N.Y.

Boot and Shoe Workers' Union, C. L. Baine, 246 Summer Street, Boston, Mass.

Brewery Workers, International Union of, Adam Huebner, Rooms 109-110 Oddfellows Temple, corner of Vine and Calhoun Streets, Cincinnati, O.

Brick, Tile and Terra Cotta Workers, International Alliance, Wm. Van Bodengraven, 56 Fifth Av., Chicago, Ill.

Bridge and Structural Ironworkers, International Association of, J. J. McNamara, 422 American Central Life Building, Cleveland, Ohio.

Broommakers' International Union, C. T. Dolan, 814 West Harrison Street, Chicago, Ill.

Bricklayers' and Masons' International Union, William Dobson, Oddfellows Building, Indianapolis, Ind.

Builders' Labourers' International Union, S. P. Johnson, 2326 East Eighth St., Los Angeles, Cal.

Carpet Workers of America, F. A. McCaskee, Kensington Ave., Philadelphia, Pa.

Carpenters and Joiners, United Brotherhood, Frank Duffy, P.O. Box 187, Indianapolis, Ind.

Carpenters and Joiners, Amalgamated Society, Thomas Atkinson, Room 76, Bible House, New York, N.Y.

Cement Workers, American Brotherhood of, H. T. Ullner, Mechanics Bank Building, San Francisco, Cal.

Carriage and Wagon Workers, International, W. P. Mavell, 403 South Division, Buffalo, N.Y.

Carvers' (Wood) Association of North America, International, Thos. J. Lodge, 10 Carlisle St., Roxbury, Mass.

Carworkers, International Association of, G. W. Gibson, Rooms 1209-10 Star Building, 356 Dearborn Street, Chicago, Ill.

Chainmakers, National Union of U.S. of America, C. R. Stanton, Box 13 Maxwell, Ind.

Compressed Air Workers, International Union, Wm. McQuade, 414 E 120 St., New York.

Curtain (Lace), Amalgamated Operators of America, G. J. Raiser, 3021 N. Fifth St., Philadelphia, Pa.

Cutting Die and Cutter Makers' International Union, Harry Reiser, 616 Sixth Ave., New York.

Cigarmakers' International Union of America, George W. Perkins, Room 820 Monon Block, 320 Dearborn Street, Chicago, Ill.

Clerks' (Retail) International Protective Association, H. J. Conway, Box 1581, Denver, Col.

Coopers' International Union of North America, W. R. Deal, Board of Trade Building, Kansas City, Kansas.

Commercial Telegraphers' Union of America, The, Wesley Russell, 930 Monon Building, Chicago, Ill.

Cloth Hat and Cap Makers of North America, Max Zuckerman, 63 E. Fourth Street, New York, N.Y.

Conductors, Order of Railroad, W. J. Maxwell, Cedar Rapids, Iowa.

Electrical Workers, International Brotherhood of, Peter W. Collins, Pierik Buildings, Springfield, Ill.

Engineers, International Union of Steam, R. A. McKee, 606 Main St., Peoria, Ill.

Engineers, Locomotive Brotherhood of, W. B. Printer, 306 Society for Savings, Cleveland, Ohio.

Engineers (Stationary), National Association of, F. W. Raven, 323 Dearborn St., Chicago, Ill.

Engineers and Machinists, Amalgamated Society of, Wm. Delahay, 74 Lafayette St., N.Y.

Elevator Constructors, International Union, W. Young, 952 North Nineteenth St., Philadelphia, Pa.

Firemen (Stationary), Int. Bro. of, C. L. Shamp, Rooms 2-4, 2502 N. 18th Street, Omaha, Neb.

Freight Handlers' and Warehousemen's Union of America, J. J. Flynn, 210 S. Halstead Street, Chicago, Ill.

Fur Workers of the U. S. and Can, Int. Association, A. V. McCormack, P.O. Box 124, Toronto, Canada.

Firemen and Engineers, Locomotive, Brotherhood of, A. H. Hawley, Peoria, Ill.

Flour and Cereal Mill Employees' International Union, A. E. Kellington, 316 Corn Exchange, Minneapolis, Minn.

Fitters' (Steam and Hot Water) International Association, W. F. Costello, 188 Crown Street, New Haven, Conn.

Foundry Employees, International Brotherhood of, G. Bechtold, 200 South Broadway, St. Louis, Mo.

Glove Workers' International Union of America, Agnes Nestor, Bush Temple of Music, Chicago, Ill.

Granite Cutters' International Association of America, Jas. Duncan, Hancock Building, Quincy, Mass.

Gold Beaters' National Protective Union of America, Thos. Delaney, 88 Barrow Street, New York.

Grinders' and Finishers' National Union (Pocket Knife), F. A. Didsbury, 508 Brook Street, Bridgeport, Conn.

Grinders' National Union (Table Knife), J. F. Gleason, 76 Chestnut St., Bristol, Conn.

Garment Workers of America, B. A. Larger, Rooms 116-117 Bible House, New York, N.Y.

Garment Workers' Union, International Ladies', John Alex. Dyche, 25-27 Third Avenue, New York, N.Y.

Glass Workers (Window), Amalgamated, of America, Chas. Bryant, Electric Building, Cleveland, Ohio.

Glass Bottle Blowers' Association of United States and Canada, William Launer, Room 930, Witherspoon Building, Juniper and Walnut Sts., Philadelphia, Pa.

Glass Snappers' National Protective Association of America (Window), L. L. Jacklini, Kane, Pa.

Glass Workers' Amalgamated Association, International, William Figolah, 418 N. Clark St., Chicago, Ill.

Glass Workers' (flint) International, W. P. Clarke, 929 Ohio Building, Toledo, Ohio.

Hatters of North America (United), Martin Lawlor, 11 Waverly Place, Room 15, New York, N.Y.

Horseshoers, International Journeymen, Roady Kenehan, 1548 Wazee Street, Denver, Col.

Hod Carriers' and Building Labourers' International Union of America, A. Persian, Box 597, Albany, N.Y.

Hotel and Restaurant Employees' and Bartenders' International Alliance, Jere L. Sullivan, Commercial Tribune Building, Cincinnati, Ohio.

Iron, Steel, and Tin Workers' Amalgamated Association, J. Williams, 50 House Building, Pittsburg, Pa.

Jewelry Workers' International Union, Geo. Bessinger, 50 Sterling St., Newark, N.J.

Knights of Labour, J. Frank O'Meara, Bliss Building, Washington, D.C.

Lathers' International Union of Wood, Wire and Metal, R. V. Brandt, 401 Superior Building, Cleveland, Ohio.

Laundry Workers' International Union, Ch. F. Bailey, Box 11, Sta. 1, Troy, N.Y.

Lake District International Seamen's Union, 121 N. Desplaines Street, Chicago, Ill.

Leather Workers on Horse Goods, United Brotherhood, J. J. Pfeiffer, 209 Postal Building, Kansas City, Mo.

Leather Workers' Amalgamated International Union of America, John Roach, Box 414, Newark, N.J.

Lithographers' International P. & B. Association of U. S. and Canada, John Treanor, 419 Pacific St., Brooklyn, N.Y.

Lobster Fishermen's International Protective Association, J. B. Webster, Vinal Haven, Me.

Longshoremen, International Association, J. J. Joyce, 1003 Mutual Life Building, Buffalo, N.Y.

Machine Printers and Color Mixers of U.S., C. McCrory, 429 Forty-second Street, Brooklyn, N.Y.

Machinists, International Association of, George Preston, 402 McGill Building, Washington, D.C.

Maintenance of Way Employees' International Brotherhood, S. J. Pegg, Vanol Building, St. Louis, Mo.

Moulders' International Union of North America, V. Kleiber, Box 699, Cincinnati, Ohio.

Marble Workers' International Association, S. C. Hogan, 715 Eagle Avenue, New York.

Meat Cutters' and Butchers' Workmen, International Union, Homer D. Call, Lock Box 212, Syracuse, N.Y.

Metal Polishers', Buffers', Platers' and Brassworkers' Union, C. R. Atherton, Neave Building, Cincinnati, Ohio.

Metal Workers of America (United), International Union, C. O. Sherman, 148 West Madison St., Chicago, Ill.

Mine Workers of America (United), Edwin Perry, 1106 State Life Building, Indianapolis, Ind.

Musicians, American Federation of, Owen Miller, 3535 Pine Street, Broadway and Market Streets, St. Louis, Mo.

Metal Workers, International Alliance of Amalgamated Sheet, J. E. Bray, 325 Nelson Building, Kansas City, Mo.

Pavers and Rammermen, International Union of, Ed. J. Hannah, 249 E 57th St., New York.

Paving Cutters' Union of U. S. and Canada, J. Sheret, Lock Box 116, Albion, N.Y.

Post Office Clerks, National Federation of, G. F. Pfeiffer, 377 Albion Street, Milwaukee, Wis.

Potters, National Brotherhood of, E. Menge, Box 181, East Liverpool, Ohio.

Powder and High Explosive Workers of America, Ch. L. Thomas, Olyphant, Pa.

Plasterers' International Association (Operative), Joseph McIlveen, 2909 Wylie Avenue, Pittsburg, Pa.

Painters', Decorators' and Paperhangers' Brotherhood of America, J. C. Skemp, Box 99, Lafayette, Indiana.

Paper Makers, United Brotherhood of America, J. T. Carey, 22 Smith Building, Watertown, N.Y.

Patternmakers' League of North America, Jas. Wilson, 403 Neave Building, Cincinnati, O.

Piano and Organ Workers' International Union of America, Chas. Dodd, 1037 Greenwood Terrace, Chicago, Ill.

Plate Printers' (Steel and Copper), International Union of America, T. L. Mahan, 319 S. Street, N.E., Washington, D.C.

Plumbers', Gasfitters', Steamfitters' and Steamfitters' Helpers, United Association of United States and Canada, T. E. Burke, 401-6 Bush Temple of Music, Chicago, Ill.

Printing Pressmen, International Union, Ch. B. Crowley, 501 Second National Bank Building, Cincinnati, Ohio.

Photo Engravers' Union of N.A., Louis A. Schwarz, 228 Apsley St., Philadelphia, Pa.

Quarryworkers' International Union of North America, Mrs. Annie Cayhne, Scampini Building, Barre, Vermont.

Railway Carmen of America, Brotherhood of, E. W. Weeks, 507 Hall Buildings, Kansas City, Mo.

Railway Clerks, Order of, R. E. Fisher, 310 Kansas City Life Building, Kansas City, Mo.

Railway Employees (Street and Electric), Amalgamated Association, W. D. Mahon, 45 Hodges Block, Detroit, Mich.

Railroad Telegraphers, Order of, L. W. Quick, Star Building, St. Louis, Mo.

Railroad Trainmen, Brotherhood of, A. E. King, Cleveland, Ohio.

Railroad Freight and Baggagemen, Brotherhood of America, M. Cronin, Woodworth Building, Lancaster, Pa.

Roofers (Composition), Damp and Fireproof Workers of U. S. and Canada, International Brotherhood, Dan. J. Ganley, 14 N. Oxford St., Brooklyn, N.Y.

Rubber Workers' Amalgamated Union of America, Clarence E. Akerstrom, 25 Grant Street, Cambridge, Mass.

Sheet Metal Workers' Amalgamated International Alliance, John E. Bray, 313 Nelson Building, Kansas City, Mo.

Sawsmiths' National Union, F. E. Kingsley, 1145 Beville Avenue, Indianapolis, Ind.

Seamen's International Union of America, W. H. Frazier, Lewis St., Boston, Mass.

Shingle Workers' International Union of America, J. E. Campbell, 405 American National Bank Building, Everett, Wash.

Shipwrights', Joiners' and Caulkers' International Union of America, Thos. Durett, 108 Marshal St., Elizabeth, N.J.

Slate and Tile Roofers' International Union of America, J. M. Gavlock, 3643 W. 47th St., Cleveland, Ohio.

Steam, Hot Water and Power Pipe Fitters and Helpers, International Association of, W. H. Davies, Room 205, Merrick Building, Chicago, Ill.

Steam Shovel and Dredgemen, International Brotherhood of, T. J. Dolan, 134 Munroe St., Chicago, Ill.

Stonecutters' (Journeymen) Association of North America, Jas. F. McHugh, Drawer 2,348, Washington, D.C.

Slate Workers, International Union of, T. H. Palmer, Pen Argyle, Pa.

Spinners' International Union, S. Ross, Box 337, New Bedford, Mass.

Steel Plate Transferers' Association of America, Dennis H. Shirman, 1301 Madison N.W., Washington, D.C.

Stage Employees' (Theatrical), International Alliance, Lee M. Hart, State Hotel, State and Harrison Street, Chicago, Ill.

Stereotypers' and Electrotypers' International Union of North America, Geo. W. Williams, 665 Massachusetts Avenue, Boston, Mass.

Switchmen's Union of North America, M. R. Welch, 326 Brisbane Building, Buffalo, N.Y.

Stove Mounters' International Union, J. H. Kaefer, 166 Concord Avenue, Detroit, Mich.

Tailors' (Journeymen) Union of America, E. J. Brais, Box 597, Bloomington, Ill.

Teamsters, International Brotherhood of, Thos. L. Hughes, 222 E. Michigan St., Indianapolis, Ind.

Textile Workers, United, of America, Albert Hibbert, P.O. Box 742, Fall River, Mass.

Tile Layers' and Helpers' (Ceramic, Mosaic and Encaustic), International Union, James P. Reynolds, Harmony, Pa.

Tin Plate Workers' International Protective Association of America, C. E. Lawyer, Reilly Block, Wheeling, W. Va.

Tip Printers International Brotherhood, T. J. Carolan, 252 Market St., Newark, N.J.

Tobacco Workers, International Union of, E. Lewis Evans, Room 56, American National Bank Building, 3rd and Main Streets, Louisville, Kentucky.

Typographical Union, International, J. W. Hays, Rooms 640-50, Newton-Claypool Building, Indianapolis, Ind.

Travellers' Goods and Leather Novelty Workers' International Union of America, Murt. Malone, 203 Jefferson Ave., Oshkosh, Wis.

Upholsterers' International Union of America, J. H. Hatch, 159 East Fifty-seventh St., New York.

Weavers' Amalgamated Association Elastic Goring, Alf. Haughton, 50 Cherry St., Brockton, Mass.

Weavers' Protective Association, American, Wire, E. E. Desmond, 148 St. Nicholas Ave., New York.

Woodmen and Sawmill Workers' International Brotherhood, A. Livingston, Lothrop, Mont.

Woodworkers' Amalgamated International Union of America, Jno. G. Meiler, 35-38 N. Albany Av., Chicago, Ill.

RECENT LEGAL DECISIONS AFFECTING LABOUR IN ONTARIO.

Labour Gazette, February, 1910.

Alien Labour Case.

A charge against the Chatham, Wallaceburg and Lake Erie Railway Co. of violating the Alien Labour Act by engaging T. J. Shields, general manager, by previous contract in the United States, was recently dismissed. It was found that though Shields came from Utica, N.Y., his parents came from Ireland, and had never been naturalized. The Court, therefore, held that Shields was a British subject.

Negligence Under Factories Act.

Appeal by defendants from a judgment in favour of plaintiff, upon the findings of a jury, for recovery of $1,500 damages. The action was brought by Jos. Doherty to recover damages for the death of his son Frank, a workman employed by defendants, alleged to have been caused by the defective condition and arrangement of the ways, works and machinery of defendants, which had not been remedied owing to the negligence of the defendants, or some of their servants as alleged. The Divisional Court dismissed the appeal with costs, being of opinion that the commission of a wrong, according to the law of the Province, had been proved by the application of the Factories Act, dangerous machinery not having been, so far as practicable, securely guarded; that the burthen of proof as to contributory negligence was on defendants, and there was evidence to support the verdict; and that the damages were not so grossly excessive as to impel the Court to grant a new trial, or put the plaintiff to the alternative of a reduction of damages.

(Doherty v. Macdonell, 1 Ont. Weekly Notes, 368.)

Labour Gazette, March, 1910.

Contributory Negligence.

Plaintiff's hand was crushed between a piece of timber being lowered into the Detroit River tunnel and the shield through which it was being lowered, alleged to have been caused by the negligence of defendants' employes. At the trial the County Court Judge of the County of Essex gave plaintiff judgment for $50 and costs. Upon an appeal to the Divisional Court the action was dismissed on the ground that the evidence showed that plaintiff had only himself to blame, first, in not having his injury promptly attended to, and later, when his condition became more serious, in not doing as he was told and going to see a surgeon.

(McKervey vs. Butler Bros., 15 Ont. Weekly Reporter, 175.)

The Factories Act.

A merchant tailor in the City of Ottawa, assuming that his premises did not come under the provisions of factory or shop regulations, received the inspector with discourtesy and obstruction in the discharge of his official duties. The inspector failing after repeated attempts to determine the relation of the alleged proprietor to the workshop in question laid an information before the police magistrate under the Factory Act, which provides that the owner or proprietor of any factory hereafter established is required to notify the inspector of the establishment of such a factory, and receive from the inspector a permit to operate the same before begin-

ning operations. Before Police Magistrate O'Keefe on Feb. 16 defendant pleaded guilty, and, having written a full apology and agreed to future compliance, the Inspector requested an adjournment. On Feb. 21, defendant, through his counsel, pleaded the excellent condition of his factory, his ignorance of the law and regret for his action. The Crown Attorney pointed out the necessity for the Factory Act, the importance of the inspector's duty, and the fact that its obstruction could not be tolerated. The magistrate added that these proceedings should be a warning to proprietors of factories and shops and that in future he should inflict a severe penalty. The case was then withdrawn, defendant paying costs.

Labour Gazette, April, 1910.

Liability for Defective Work.

A question of some interest was recently tried at the Guelph Divisional Court. The question for decision was whether or not a Brussels weaver of the Guelph carpet mills was responsible for defective work. He sued for a balance of wages owing him by the company when the Brussels weavers went out. The company did not dispute his claim, but set up a counter claim for a rug which they said had been spoilt by the plaintiff's work. The case was a test case to decide whether or not the company had the right to make a deduction for defective work. The rug in question was made up some time last summer, and no deduction was made at the time, as the foreman was endeavouring to dispose of it without loss. But from the plaintiff's wages in December the deduction was made. Upon the main point, Judge Jamieson held that a weaver could not charge for defective work and was liable for damages for goods spoilt by reason of defective work. He held, however, that the company, by paying wages at the time, had waived the right to deduct, and could not make the deduction from December wages. As a result defendants withdrew their counter-claim, and Judge gave plaintiff judgment for the balance of his December wages.

Damages for Injuries.

A jury in the Assize Court presided over by Mr. Justice Latchford, has awarded James Dolley $1,500 damages for injuries received last June by falling from the second to the first floor in the McCann-Knox Milling Company's factory on Jarvis St. Dolley sued for $5,000, and the statement of claim was to the effect that the elevator gave way either through improper construction or through not being properly protected.

Fined for Calling "Scabs."

Police Magistrate Denison has demonstrated that the word "scabs" as applied to employes acting as substitutes for strikers cannot be used. Two men had been fined by him $20 and $30 respectively, with the option of 30 days in jail, for applying the epithet to strike breakers at the Continental Costume Co. "I want it to be distinctly understood that I object to that word," he stated decisively before imposing the fine.

Labour Gazette, May, 1910.

Workmen's Compensation Act.

Chief Justice Meredith has found W. J. McLaughton entitled to recover $1,750 and costs against the Ontario Iron and Steel Co. of Toronto. It was an action for damages to plaintiff, who was employed in defendants' manufactory as fore-

man moulder and received injuries on Dec. 17, 1908, while engaged in his work, owing to a hook, a heavy part of an overhead crane, falling and striking him on the head, causing a fracture of the skull, as he alleges, through the negligence of defendants. The jury negatived the grounds of negligence advanced and found that the appliances were reasonably safe and sufficient for the purpose for which they were used, but found that the man's injuries were caused by negligence on the part of the man who operated the crane. The Judge states: "In my opinion Murphy vs. Wilson does not apply, and McCauley (who operated the crane) should be held to have been a person having the charge or control of an engine or a machine upon a railway within the meaning of Clause 5 of Section 3 of the Workmen's Compensation for Injuries Act, and plaintiff is entitled to recover."

Damages for Loss of Legs

The Divisional Court has awarded Walter C. Barnett, a London butcher, $6,000 against the G.T.R. for the loss of both legs. He was riding home on a Pere Marquette train when there was a collision in the London yards with a G. T. R. engine and van and he was injured. He had paid no fare, but officials of the Pere Marquette, who had seen him, had asked for no fare. At the trial he was non-suited by Chief Justice Meredith, the G. T. R. contending that the plaintiff was a trespasser on the Pere Marquette.

Thrown by Train Step.

A portable step, such as is used to enable passengers to descend from the high steps of trains, caused Miss Essie M. Hoskin a broken leg, for which, at the trial, she was awarded $1,250 and costs against the M. C. R. The Divisional Court dismissed the railway's appeal. Miss Hoskin was a traveller for the sale of corsets and costumes, and stumbled on the step at the Amherstburg station on her trip there in May, 1909. She alleged that the step had been carelessly placed by the conductor, so that one edge was on the station platform, and it lurched when she stepped on it.

Compensation for Husband's Death.

A settlement has been reached between Frank Smith's widow and Beardmore and Co., whereby the widow and child receive $1,350. Smith was a labourer, 50 years of age, and received a daily wage of $1.10. He met his death by falling into a hot vat at the company's works at Acton. "A generous settlement," was the comment of Chief Justice Mulock, who ratified the settlement.

Labour Gazette, June, 1910.

Workmen's Compensation.

At the Spring Assizes at Brockville, on April 6, an action for $1,500 damages for injury received from a rip or circular bench saw was tried before a jury. Plaintiff was engaged in ripping by means of the circular saw a piece of wood into 3-inch strips for the purpose of making packing boxes, the board being about 3 ft. long. As he ripped a strip off he reached back of the saw with his left hand and pulled the piece which he was ripping back, preparatory to cutting another 3-inch strip. While in this act the board swerved, throwing his left hand on the back of the saw. The tendons of his first two fingers were severed and partly destroyed, causing, in the minds of the medical experts called by plaintiff, a stiffness which would be more or less permanent. The experts for defendants considered that an opera-

tion might improve the condition of the fingers, providing the tendons had not been greatly injured. Defendants alleged plaintiff's carelessness. The jury, in reply to questions by Mr. Justice Latchford, said that the saw was dangerous and might have been guarded, but was not; that the plaintiff could not have avoided the accident by reasonable care and diligence, and that damages of $700 were sustained.

(O'Mara vs. James Smart Manufacturing Co.)

Settlement of Accident Claim.

Mr. Justice Teetzel has approved of the settlement arrived at between A. F. Karajades, administrator of the estate of Chris. V. Safaraes and the Canada Foundry Co. Safaraes, while employed at the foundry, was killed. The company pays $600, one-third of which goes direct to the widow, who with four children, all infants, is at present in Macedonia. The balance of the money will be paid to her in yearly instalments for the support of the little ones. A fifth child, Karsto Safaraes, is at present in Toronto, and his Lordship directs that he be sent to his mother, transportation and arrears for board, etc., here to be paid out of the $600.

Labour Gazette, July, 1910.

Negligence by Foreman.

Plaintiff brought action to recover damages for injuries by falling from a gangway which was used in going to and from his work in a building, basing his right against Contractor W. for breach of his duty to provide a safe and sufficient gangway and to keep it in such condition, and basing his right to recover from Contractor R. on alleged interference by him with the gangway, which contributed to its unsafe condition. The action was tried by Chief Justice Meredith, who dispensed with the jury except as to damages, which they assessed at $800. He held that there was nothing to indicate to plaintiff that a certain addition which was made of the gangway by widening it was not intended to be used as part of the gangway, and that it was the duty of L. (W.'s foreman) to see that it might be safely used in its altered state, which could have been readily ascertained by an inspection of it. If it had been inspected the accident would not have happened. The Chief Justice held also that the accident was caused by L.'s negligence in performance of the duty, with which he was entrusted by defendant W., of seeing that the ways, etc., were in proper condition, that the plaintiff was not guilty of contributory negligence, and that he was entitled to judgment against W. for $800, as assessed by the jury, with costs. Action against R. dismissed without costs.

(Christie vs. Webb and Richardson, 15 Ont. W. R. 802.)

Attempt to Board Train.

Plaintiff was a labourer in the employ of contractors grading a portion of defendants' line of railway. In attempting to board a moving train, plaintiff came in contact with a baggage truck left standing on the station platform, with the result that his leg was broken. Plaintiff sued to recover damages, alleging negligence in the placing of the truck, in inviting plaintiff to board and starting too soon, and in appliances for boarding the train being imperfect and out of repair. At the trial Mr. Justice MacMahon held that plaintiff had failed to establish negligence against defendants, and that he was himself negligent in endeavouring to board the train when in motion, and dismissed the action. Upon appeal to the Court of Appeal this judgment was confirmed.

(Perden vs. Canadian Pacific R. Co., Ont. W. R. 836.)

No Negligence.

Plaintiff, a servant of defendants, sued to recover damages for injuries sustained while obtaining a load of sand from defendants' pit by a large lump of frozen clay falling from the bank above and breaking his leg, owing to the alleged negligence of defendants. At the trial Sir John Boyd, Chancellor, entered judgment for plaintiff for $800, on the findings of the jury that defendants were negligent in failing to see that the pit was kept in proper condition, and in failing to remove a projection of clay, and that defendant had a better knowledge of the pit. The trial Judge's judgment on these findings was appealed to the Divisional Court, where it was held that the whole situation was as well known to plaintiff as to defendants, and that he having chosen to go into a situation of such obvious danger (i.e., in the dusk of a winter's evening) defendants ought not to be held liable. Appeal allowed and action dismissed.

(Arnold vs. Stothers and Gaby, 16 Ont. W. R. 234.)

Labour Gazette, August, 1910.

Loss of Finger.

A verdict for $100 damages was recently awarded Francesca Danno, an Italian labourer, against the Orpen Construction Co. by a jury in the County Court, of the County of York, at Toronto. Danno sued for $300 damages for the loss of a finger, which he sustained while working on sewers. He was operating a pulley and bucket, when, without signal, the latter began to rise, his finger being caught in the pulley, and so badly damaged as to need amputation.

Labour Gazette, September, 1910.

Disallowance of Strike Wages.

Because Thomas Allen is what is called a "privilege" member of the National Builders' Labourers' Union, and because he was not working when the union declared a strike on June 2, Allen is not entitled to strike pay from the union. This is in accordance with a decision given by Judge Morson in Division Court at Toronto. Allen, who was one of the organizers of the union, has been a member for 24 years, and is now old and finds it difficult to get jobs, sued the union for $15, being at the rate of $5 a week for three weeks. The Judge ruled that, according to the union by-laws, Allen was not entitled to any strike wages on two grounds: that he was a privilege member, and, as he paid only half the regular dues, was entitled to $75 death benefits, but no wages in case of strike, and that he was not working at the time. He did not, however, allow the union their costs.

Labour Gazette, October, 1910.

Cost of Quelling Riot During Strike.

The Crown and others brought an action against the Municipal Corporation of Sault Ste. Marie to recover the costs, charges and expenses incurred by calling out troops to quell a riot during a strike of the employes of the Lake Superior Corporation at the town of Sault Ste. Marie, in September and October, 1903. Plaintiffs claimed $7,293. Defendants disputed the regularity of the requisition for troops and the necessity of calling out any other than the local regiment, whose claims were paid by the defendants. The action was tried by Chief Justice Falconbridge who held that the requisition complied with the requirements of the Militia

Act, R. S. C., c.41, s. 34. He gave judgment for the plaintiff with costs. Referring to the defence the Chief Justice said: "It does not commend itself to me as a matter of morals. When the requisition was signed there were 1,200 to 1,500 riotous men at the works of the allied companies, with the prospect of their numbers being largely increased as men were coming in from the outside works. Frantic telegrams were dispatched by the Mayor, the Commanding Officer of the local regiment of militia, the members of the House of Commons and the Legislative Assembly to the Minister of Militia, to his Deputy, and to the D.O.C. at Toronto, the few men of the 97th (the local) regiment, who could be mustered, were on duty at various points for 36 hours when relieved by the R. C. R. The Mayor had stated in one of his telegrams that the local militia was not able to cope with the situation and that 200 more troops were needed under all the circumstances. I have not the slightest doubt but that the prompt action of the D.O.C. at Toronto (the late General, then Colonel, Buchan), in taking the whole of the available permanent force and ordering out 70 men from each of the three city regiments, saved the situation and prevented incalculable injury to property and loss of life. There is another matter pleaded in the amended statement of defence. It is in effect that large public works, e.g., the ship canal, the swing bridge, and the electrical plant are in the immediate vicinity of the scene of the rioting and that the expense connected with protecting these works (which are said to have cost several millions of dollars) should be paid by His Majesty, out of the public moneys of the Dominion of Canada, and not by the town. This I hold to be no defence in law. And it does not appeal to me on any other ground, for it is interesting to consider what would have been the plight of the town and its citizens if the locks, the bridge, the electrical plant and the works of the allied companies had been destroyed by one cataclysm. Plaintiffs are entitled to judgment."

(Rex. v. Sault Ste. Marie, 16 Ont., W. R. 871.)

Labour Gazette, November, 1910.

Alien Labour Case.

Jacob Rackhoff, a Russian Jew, was, on Oct. 27, fined $600 in the police court at Hamilton, after pleading guilty to having illegally brought alien labour into Canada. Rackhoff operates a tailor's shop. The case was brought to light by the Garment Workers' Union, who asked the Department of Immigration at Ottawa to send an officer to investigate it. An officer was despatched and reported his findings to Ottawa. Later the assistant superintendent of immigration arrived, and after conducting an investigation and hearing the facts revealed by the Union, applied to the police for a warrant for the arrest of Rackhoff. Rackhoff was later allowed out on $500 bail. When the case was gone on with Rackhoff was charged that he assisted persons to enter the country in an illegal manner. A plea of guilty was entered and petition made that the full penalty be not inflicted. His Worship then imposed a fine of $100 for each offence, making the total fine $600.

Railway Censured for Man's Long Duty.

The jury that investigated the death of Edward Thomas Crane, the watchman at the Dunn Avenue Crossing, Toronto, who was killed at his post recently, returned a verdict of accidental death, but censured the G. T. R. for allowing a man to remain on duty for 21 hours, as Crane had done. Coroner Lynd also commented on the hardships of working such long hours, and especially for a man of 68 years of age. The accident occurred shortly after 7, and according to Peter

Morrissey, the first witness examined, he would have been relieved in 15 minutes. A moment before the accident, Leonard Harris, driver of a milk waggon, passed Crane and spoke to him. He had only gone a few yards when he heard the engine whistle, and looking back saw Crane hurled into the air. Harris' father was struck by an engine at the same crossing some years ago. The evidence of Geo. Teale, of Belleville, the engineer, was to the effect that it was not customary to blow the whistle at this crossing, but seeing Crane in the way he did so. He believed that Crane thought he was out of the way.

Damages for Wife's Death.

Chief Justice Falconbridge and jury awarded R. G. Johnston, Gananoque, $3,000 against the Thousand Island Railway Company, for the death of his wife. Mrs. Johnston was killed when a shunting engine smashed the rig she was driving. The action was tried at Kingston.

Mutilated Thumb.

Mr. Justice Middleton, in single court, has approved of the settlement arrived at between the Toronto Carpet Co. and Albert Skeffington, whereby the latter, an infant, and his father, each get $200, as recompense for a mutilated thumb, sustained by the younger Skeffington, while in the employ of the company.

Labour Gazette, January, 1911.

Importation of Aliens.

Jacob Rakow, a Russian Jew, was recently fined $600 by the Police Magistrate of Hamilton upon a plea of guilty to a charge of having smuggled aliens into the Dominion to work as tailors. Failing once in an attempt to evade the immigration authorities, when he dumped a party of six Russians into Toronto, Rakow devised another scheme and had the six sent to Rochester. Three were later smuggled in by boat, and three were brought in by rail. Counsel for the Immigration Department declared that Rakow had tried to intimidate witnesses. He pleaded guilty. His counsel said he had gone into the matter fully with counsel for the department, and from the investigation he made it seemed that as to six cases discussed with him Rakow was guilty of a violation. "It appears to me the wisest course to plead guilty, and under the circumstances I understand my learned friend does not intend to ask for a heavy fine." "The penalty is from $50 to $500," said counsel for the department. "The department has been flouted time and again, and while we don't ask for the extreme penalty, we want a sufficient fine imposed to teach Rakow that he cannot do this. Rakow brought six men to Toronto, who had worked with him in New York. They were caught by an officer and deported. Rakow had them sent from New York to Rochester. They had been instructed how to evade the law, and three got into the country by rail and three by boat. Witnesses have been intimidated, and in view of this I don't think the lowest fine should be imposed. I think defendant's counsel is agreeable to a $100 fine in each case." Rakow did not have sufficient money to pay the fine in the court, but he was allowed to go on his counsel's assurance that the money would be paid. The immigration officer who ordered the arrest of Rakow stated that the six men whom Rakow brought into the country will be deported. He also stated that he is investigating the case of Rakow, with the view of deporting him if he cannot show good reason why such should not be done. Rakow, by pleading guilty on the

advice of his counsel, prevented the submission of evidence which might have been an interesting revelation of the methods employed by him and others to trick the immigration officials.

Workmen's Compensation.

In the case of McDonald v. Murphy, an appeal was taken to the Division Court by defendant from the judgment of Mulock, C.J., of Oct. 4, 1910. This action brought by the widow and children of John McDonald, under the Workmen's Compensation for Injuries' Act, claimed $6,000 damages for the death of said John McDonald, alleged to have been caused while in defendant's employ, by the falling of a derrick upon him in defendant's quarry. At the trial judgment was given plaintiffs for $1,000 and costs. Judgment: The common law obligation of the master is to maintain a suitable and safe place for machinery and appliances for the work to be done, and to warn the servants of all dangers known, or which ought to be known, to him, unless already known to the servant. The jury have found that the master was negligent in removing the third guy from the derrick without first making the boom fast by anchoring and so securing the stability of the whole until this was brought about by the placing of the "stiff legs." This was the cause of the accident. The jury have fond that there was no contributory negligence. The deceased was lawfully upon the premises and the fact that at the time the derrick fell he was climbing the mast is a mere incident, unless his so doing amounted to contributory negligence. The appeal should be dismissed with costs.

TRADE DISPUTES IN ONTARIO.

Labour Gazette, February, 1910.

Strike of Carpet Weavers at Guelph.

A strike of 28 carpet weavers at Guelph, which began on December 11, continued throughout January, but it was reported that the company had procured men from England to take the place of the strikers. The cause of the dispute, according to the employers, was the refusal of the men to work overtime or on Saturday afternoons. But according to the men the causes were the refusal of the employers to pay extra for overtime, and general dissatisfaction with the working conditions.

Strike of Bricklayers at Toronto.

A strike of bricklayers at Toronto began on Jan. 1, and affected two firms and ten employes. The cause of the dispute was the refusal of the employers to grant a demand for an increase in wages from 50 cts. to 60 cts. per hour. The schedule work for building is 50 cts., but an additional 10 cts. was claimed for sewer work.

Labour Gazette, March, 1910.

Strike of Garment Workers at Toronto.

On Feb. 2, a strike of about 58 female garment workers took place at Toronto. The cause of the dispute was an objection to the practice employed by the firm involved of charging their employes for the thread used and deducting the

cost from their wages. It was claimed by the employes that the deduction came to from $1 to $1.50 per week while their wages were from $5 to $7 per week. The employers stated that their system of charging for thread had been in force for 20 years.

Strike of Cloakmakers at Toronto.

On Feb. 3, a strike of cloakmakers of the Continental Costume Co., took place at Toronto in which about 48 male and 22 female employes were reported to be directly affected and 12 male and 3 female employes to be indirectly affected. The dispute arose from a demand for a union shop.

Strike of Printers at Peterborough.

On Feb. 4, a strike of about 35 journeymen printers and 5 apprentices was declared at Peterborough, affecting the three newspaper offices of that place. The cause of the dispute was the refusal of the employers to grant a demand for an increase in wages from $12 to $14 per week for the day printers. On Feb. 9, the strike was declared off, a compromise having been effected.

Labour Gazette, April, 1910.

Strike of Moulders at Smith's Falls.

On March 23, about 120 moulders and coremakers at Smith's Falls, declared a strike on account of the refusal of their employers to grant a demand for an increase of 15 per cent. in pay for piece work, and for certain changes in shop rules. A settlement was effected on March 25, mutual concessions being made.

Lockout of Pianomakers at Kingston.

During the month of March the Wormworth Piano Co., of Kingston, endeavored to effect a re-arrangement of piecework prices in a number of departments of their factory. The factory is run on the contract system, being divided into different departments and a price is placed on the work to be done in each. The price is paid to a contractor, who engages his own help and pays them. The company claimed that most of these prices had been made when the factory was turning out only 4 or 5 pianos a week, instead of 25 as at present, and that with the added machinery and labour saving devices some of the contractors were making very large pay. It was claimed by the contractors, however, that they could not afford to accept the reduced rates offered by the company, and on March 21 about 100 of the employes stopped work. On March 28, an agreement was reached, according to which the old rates were to prevail for one year after the resumption of work.

Strike of Cigarmakers at Toronto.

On March 18 about 65 stripper girls declared a strike in a cigar factory at Toronto, causing about 107 men to stop work also. It was reported by the employers that the strikers had objected that there were too many bosses, but it was claimed by the strikers that they wanted higher wages. Work was resumed on March 24, according to the employers, on the same basis as before the strike, but according to another report a compromise was reached under which they were to receive regular wages.

Strike of Wheelwrights at Gananoque.

It was reported in the press that a strike of wheelwrights took place at Gananoque about March 23, on account of the refusal of the company to grant a demand of extra pay for overtime. No settlement was reported, but the places of the strikers were filled.

Labour Gazette, May, 1910.

Strike of Iron Workers' Labourers at Hamilton.

On April 1, about 500 employes of the Hamilton Steel and Iron Co. stopped work, the alleged cause being dissatisfaction with certain of the foremen. Work was resumed on April 2, the company having removed the foremen.

Strike of Shoeworkers at Berlin.

On April 11, a strike of shoeworkers took place at Berlin in which 49 male and 16 female employes were affected directly and 4 male and 3 female employes indirectly. The dispute arose on account of the Ahrens Shoe Co. notifying their staff that a two weeks notice would be required of any employe wishing to leave the factory and pay for that time would be withheld to enforce this order. Negotiations were instituted and on April 20 work was resumed on the terms of a week's notice of ceasing employment to be given on either side or forfeit of week's pay; time or piece work checks to be collected on Wednesday with pay on Saturday; payment every other week.

Strike of Longshoremen at Point Edward.

On April 28 about 125 longshoremen employed by Messrs. Bassett and Smith, contractors, and the Northern Navigation Co., declared a strike at Point Edward, refusing to work with some Italians, whom the employers claimed they had to bring from Toronto, as they had been unable to get sufficient labour. On the next day the strikers returned to work on the understanding that they would not molest the Italians, and that the employers would not discriminate against them.

Strike of Freight-Handlers at Hamilton.

On April 11 a strike of about 20 freight-handlers of the Toronto, Hamilton and Buffalo Ry. Co. took place at Hamilton, on account of the refusal of the employers to grant a demand for an increase in wages. On April 13 an increase of one cent per hour was granted. Seven men who went out on April 11 were not taken back.

Strike of Labourers at Hamilton.

On April 18 a strike of civic labourers working on the water mains at Hamilton stopped work on account of a foreman being placed over them. Twelve men were dismissed and six left of their own accord. The work was not affected longer than one day.

Labour Gazette, June, 1910.

Strike of Painters at Toronto.

On May 4 a strike of painters took place at Toronto on account of the refusal of the employers to grant a demand for an increase of wages from 30 cents to 35 cents an hour. It was reported that about 500 went out on the first day of the

strike, but the number of strikers increased later to about 1,100 men. A report received from the Painters' Union placed the number of firms affected at about 150 and the number of employees at about 1,500. On May 28 an official statement was issued by the strikers to the effect that as a majority of the employers were at that time paying 35 cents an hour the object of the strike was won and it was declared off, though no agreement was signed. The Master Painters' Association stated that they had not agreed to any minimum rate.

Strike of Tailors at Hamilton.

On May 4 a strike of journeymen tailors took place at Hamilton on account of the refusal of the employers to grant a demand for an increase in wages, which was made on the ground of the increased cost of living, and of the fact that the wages had increased very little during the past 11 years. The strike was declared off on May 10, the employers having agreed to the new bill of prices. It was stated by the Union that 15 firms and 50 employees, of whom 33 were males, were directly affected by the dispute, and 5 female employees were indirectly affected.

Strike of Carpenters at Kingston.

On May 2 a strike of carpenters took place at Kingston, on account of the refusal of the employers to grant a demand for an increase in wages from $2.50 to $3 for an 8-hour day. According to a report received from the Carpenters' Union about 16 firms and 70 employees were involved in the dispute. Two contractors employing 2 hands each granted the demand, but with respect to the others no settlement was reported. A board of arbitrators decided for 37½ cents per hour for eight-hour day.

Strike of Cigar Makers at London.

On May 16 a strike of cigar makers took place at London on account of the refusal of 5 firms to grant a demand for an increase in piece work rates of $1 per 1,000 on all cigars made. About 208 employes were involved in this dispute, of whom 34 were females. Four small shops, employing about 12 men altogether, agreed to the new rate. No settlement of the dispute was reported.

Strike of Tilelayers at Toronto.

On May 9 a strike of about 60 tilelayers took place at Toronto on account of the employers refusing to grant an increase in wages. The improvers asked for an advance from 25 cents to 30 cents per hour and the journeymen from 35 cents to 40 cents. The strike was declared off on May 14, the increase in wages having been granted.

Strike of Sheet Metal Workers at Hamilton.

On May 6 about 45 sheet metal workers in 12 shops declared a strike at Hamilton on account of the refusal of the employers to grant a demand for an increase in wages of 5 cts. an hour. After negotiations a compromise was reached on May 28, and work was resumed on May 30, the men accepting an increase of 2½ cts. an hour.

Strike of Iron Moulders at Peterborough.

A strike of iron moulders was reported to have taken place at Peterborough during May, in which 3 shops were involved. The dispute arose from a demand for better conditions of labour. No settlement was reported.

Labour Gazette, July, 1910.

Strike of Cotton Mill Hands at Hamilton.

A strike of cotton mill hands at Hamilton began on May 5, on account of the refusal of the employers to grant a demand for an increase of 10 per cent. in wages. About 125 male and 150 female employes were reported to have been directly affected.

Strike of Carpenters at Port Arthur and Fort William.

On June 7 a general strike of carpenters took place at Port Arthur and Fort William in which about 500 men were reported to be involved. The object of the dispute was to obtain an increase in the minimum wage from 35c. to 40c. per hour. During the progress of the dispute many of the contractors agreed to the terms of the Carpenters' Union and in about a fortnight industrial conditions ceased to be greatly affected.

Strike of Brewery Workers at Hamilton.

On June 30 a strike of brewery workers took place at Hamilton affecting 2 firms and 75 employes. The cause of the dispute was the refusal of the employers to sign a new agreement in place of one which expired on May 1. The new schedule called for an increase in wages of $1.50 per week, pay for over-time and shorter hours. The old hours ranged from 10 to 14 per day, and it was claimed that some employes were required to work 7 days in the week. The new rate demanded was 55 hours per week in the summer, 50 hours in the winter, and overtime to count as time and a half. No settlement was reported.

Strike of Iron Moulders at Ottawa.

On June 1 a strike of iron moulders engaged in the manufacture of stoves took place at Ottawa, involving 2 firms and 26 employes. The cause of the dispute was the refusal of the employers to grant a demand for an increase in the minimum wage from $2.50 to $2.75 per day. On June 7, it was reported that, while the strike was still in progress, the firms were no longer affected. The employers refused to recognize the union and would only grant increases on the basis of individual merit.

Strike of Labourers at Port Arthur.

On June 15 about 36 labourers employed at the construction of a dry dock at Port Arthur were reported to have stopped work owing to the refusal of the employers to grant a demand for an increase in wages from 20 to 22½ cts. per hour. On June 16, five of the strikers were reported by the employers to have resumed work at the old rate. Eight more returned on June 18, and three on June 21. While there was no definite termination of the strike, the employers ceased to be affected by it.

Strike of Builders' Labourers at Toronto.

On June 1 a strike of builders' labourers was declared at Toronto in which about 300 firms and 1,500 employes were involved. The cause of the dispute was the refusal of the employers to sign an agreement calling for a minimum, 28 cts. per hour; time over 9 hours or if working with mechanics over 8 hours or after 12 on Saturday to be paid time and a half; the agreement to last till June, 1911. No settlement was reported, but many of the strikers procured work on the terms demanded. The strike was declared off on July 26.

Labour Gazette, August, 1910.

Strike of Carmen and Steamfitters of C. N. R.

On July 7 a strike was declared by about 600 carmen and steamfitters of the C. N. R. Co., from Port Arthur to Edmonton, on account of the refusal of the Company to grant a demand for an increase in wages. It was alleged by the men that they were working for the same wage as in 1906 and that living expenses had since then increased 50 per cent. The dispute was referred to a Board under the Industrial Disputes Investigations Act, which presented a unanimous report on June 24. The finding of the Board was not accepted by the men, who alleged that in many cases it would reduce the earning capacity by 10 per cent., would increase the working hours of the relay men from 10 per day, with overtime for Sundays and holidays, to 11 per day, with straight time for Sundays and holidays. No settlement was effected during the month, but it was stated that a large number of the steamfitters who went on strike obtained employment elsewhere.

Strike of Employes of G. T. R. Co.

On July 18 a strike was declared by the conductors and trainmen of the G. T. R. and subsidiary lines, 2,500 men being affected in Canada and 1,500 in the United States. The cause of the dispute was the failure to reach an agreement with reference to wages and general conditions of employment. The matter had been referred to a Board under the Industrial Disputes Investigation Act, but the men refused to accept the award, and struck. After much negotiation and outside intervention, a compromise was effected, and on Aug. 2 the strike was declared off, but the agreement of increased pay previously offered by President Hays but refused by the men was accepted, with a further increase to take place on Jan. 1, 1912, to the schedule of the C. P. R.; strikers to be taken back as soon as possible.

Strike of Checkers at Brantford.

On July 2 a strike of 25 checkers and truckers of the G. T. R. took place at Brantford on account of the refusal of the company to grant an increase in wages, the checkers demanding an advance from 16 to 18 cents per hour and the truckers from 14½ to 16½ cents per hour. Work was resumed on July 7, a settlement being reached by which the wages of the checkers were increased from $42 to $45 per month and the wages of the truckers from 14½ to 15 cents per hour.

Strike of Civic Labourers at North Toronto.

On July 28 a strike of civic labourers took place at North Toronto on account of the refusal of the corporation to grant a demand for an increase in wages from 22 to 25 cents an hour. No settlement of the dispute was reported.

Labour Gazette, September, 1910.

Strike of Plasterers at Ottawa.

On Aug. 1 a strike of plasterers took place at Ottawa, in which 20 firms and 60 employes, members of the International Operative Plasterers' Union, were involved. The cause of the dispute was the refusal of the employers to grant a demand for an increase in wages from 40 to 45 cents an hour. On Aug. 8 a compromise was reached with 10 firms, by which the wages were increased to 42½ cents an hour. The other firms employed members of the National Plasterers' Union. Some of the strikers having left town during the strike none remained idle after Aug. 8.

Labour Gazette, October, 1910.

Strike of Plumbers at Ottawa.

On Sept. 17 a general strike of plumbers took place at Montreal, Que., in which about 100 firms and 375 employees were involved. On Sept. 19 the strike spread to Ottawa, where 31 men employed by two Montreal firms went out. Work was only stopped on one building in Ottawa, however, the plumbing in the other being practically completed. The cause of the dispute was the refusal of the employers to sign an agreement providing for an eight-hour day and wages of 40 cents per hour for the first year, 42½ cents per hour for the second year and 45 cents an hour for the third year.

Labour Gazette, November, 1910.

Strike of Platers and Buffers at St. Catharines.

On October 12 about 16 platers and buffers at St. Catharines stopped work because they thought a new system of costs which was introduced meant a cut in their piece work prices. The men, however, resumed work on the following day, after a full explanation of the change had been made to them.

BRITISH LABOUR NEWS.

Trade Union Membership.

At the end of 1909 the number of registered and unregistered Trade Unions known by the department to be in existence was 1,153, with a total membership of 2,347,461. In 1900 1,957,710.

Industrial Co-operation.

Returns from Workmen's Co-operative Societies for Production and Distribution in the United Kingdom shows that 1,573 such societies were at work in 1908. These societies had a total membership of 2,446,696, or 9.6 per cent. of the estimated population of the United Kingdom of 20 years of age and upwards. Their total capital amounted to £47,056,500, being made up of £32,879,798 shares, £10,380,409 loans, and £3,796,293 reserve and insurance funds. Compared with 1907 there was a decrease of 22 in the number of societies, but increases of 3.6 per cent. in membership and of 4.1 per cent. in total capital. On a total trade of £125,001,572 the net profit for the year was £11,677,297, which is equal to 35.5 per cent. upon the total share capital of all the societies. The total number of persons directly employed by the 1,573 societies was 116,603.

Changes in Wages.

The total number of workpeople whose wages were reported to be changed in the first quarter of 1910 was 375,093, as compared with 1,056,810 in the corresponding period of 1909. The changes arranged gave 238,939 workpeople a net increase of £5,997 per week and 132,245 workpeople a net decrease of £8,323 per week, while the remaining 3,909 workpeople had upward and downward changes which left their wages at the same level as at the beginning of the year. The effect of all the changes was thus a decrease of £2,326 per week as compared with one of £49,306 per week in the corresponding period of 1909.

Changes in Hours.

The total number of workpeople reported as affected by changes in hours in the first quarter of 1910 was 3,843, the net decrease in their working hours being 4,994 per week.

Trade Disputes.

For the first quarter of 1910 the number of trade disputes was 81, the number of workpeople affected was 138,052, and the aggregate duration in working days 2,372,900, as compared with 76, 21,237 and 386,200 respectively in the corresponding period of 1909.

Lead and other Poisoning.

During the first quarter of 1910 there were 122 cases and 14 deaths from lead and other poisoning and anthrax in factories and workshops, as compared with 143 cases and 11 deaths in 1909. There were also 42 cases and 8 deaths from lead poisoning among house painters and plumbers, as compared with 56 cases and 11 deaths in the corresponding period of 1909.

Industrial Accidents.

During the first quarter of 1910 the total number of work people reported as killed in the course of their employment (exclusive of seamen) was 701, as compared with 825 in 1909. The total number of seamen killed in the same period was 224 in 1910 and 293 in 1909.

Unemployed.

In the 416 trade unions, with a net membership of 701,766 making returns, 36,543, or 5.2 per cent., were reported as unemployed at the end of March, 1910, as compared with 8.2 per cent. at the end of March, 1909.

Changes in Wages.

The total number of workpeople whose wages were reported to be changed in the first half of 1910 was 449,094, as compared with 1,091,586 in the corresponding period of 1909. The changes arranged gave 299,435 workpeople a net increase of £8,384 per week, and 145,750 workpeople a net decrease of £5,594 per week, while the remaining 3,909 workpeople had upward and downward changes, which left their wages at the same level as at the beginning of the year. The net effect of all the changes was thus an increase of £2,790 per week, as compared with a decrease of £67,744 per week in the corresponding period of 1909.

Changes in Hours.

The total number of workpeople reported as affected by changes in hours of labour during the first half of 1910 was 9,186. Of these 868 had their working time increased by 302 hours per week, and 8,318 had reductions amounting to 9,985 hours per week.

Trade Disputes.

For the first half of 1910 the number of trade disputes was 212, the number of workpeople affected was 218,634, and the aggregate duration in working days 3,392,500, as compared with 164, 48,030 and 772,200, respectively, in the corresponding period of 1909.

Lead and other Poisoning.

During the first half of 1910 there were reported 255 cases and 24 deaths from lead and other poisoning and anthrax in factories and workshops, as compared with 309 cases and 23 deaths in the corresponding period of 1909. There were also 100 cases and 19 deaths from lead poisoning among house painters and plumbers, as compared with 114 cases and 23 deaths in the corresponding period of 1909.

Unemployed.

In the 416 trade unions, with a net membership of 702,522 making returns, 25,866, or 3.7 per cent. were reported as unemployed at the end of June, 1910, as compared with 7.9 per cent. at the end of June, 1909.

Industrial Accidents.

During the first half of 1910 the total number of workpeople reported as killed in the course of their employment (exclusive of seamen) was 1,500, as compared with 1,452 in 1909. The total number of seamen killed in the same period was 555 in 1910, and 484 in 1909.

Changes in Wages.

The total number of workpeople whose wages were reported to be changed in the first nine months of 1910 was 484,587, as compared with 1,117,876 in the corresponding period of 1909. The changes arranged gave 336,122 workpeople a net increase of £11,966 per week, and 148,465 workpeople a net decrease of £5,421 per week. The net effect of all the changes was thus an increase of £6,545 per week, as compared with a decrease of £69,085 per week in the corresponding period of 1909.

Changes in Hours.

The total number of workpeople affected by changes in hours of labour in the first nine months of 1910 was 11,742. Of these 3,068 had their hours increased by 5,414 per week, and 8,674 had an aggregate reduction of 10,751 hours per week.

Trade Disputes.

In the first nine months of 1910 the number of trade disputes was 360, the number of workpeople affected 319,898, and the aggregate duration in working days 4,697,300, as compared with 306, 261,285 and 2,257,700, respectively, in the corresponding period of 1909.

Lead and other Poisoning.

During the first nine months of 1910 there were reported 412 cases and 29 deaths from lead and other poisoning and anthrax in factories and workshops, as compared with 495 cases and 30 deaths in the corresponding period of 1909. There were also 184 cases and 30 deaths from lead poisoning among house painters and plumbers, as compared with 177 cases and 36 deaths in the corresponding period of 1909.

Unemployed.

In the 416 trade unions, with a membership of 674,760 making returns, 28,703, or 4.3 per cent., were reported as unemployed at the end of September, 1910, as compared with 7.4 per cent. at the end of September, 1909.

Industrial Accidents.

During the first nine months of 1910 the total number of workpeople reported as killed in the course of their employment (exclusive of seamen) was 2,179, as compared with 2,093 in 1910. The total number of seamen killed during the same period was 741 in 1910 and 685 in 1909.

Profit Sharing for 1909-1910.

At the end of June, 1910, there were 69 firms in the United Kingdom which were practising profit sharing. Two of the firms previously included in the statistics had abandoned profit sharing, while one firm had suspended, though not definitely abandoned, its scheme. Five other schemes were started since June, 1909. The total number of persons employed by the 69 firms known to be practising profit sharing at the end of June, 1910, varied between 84,350 and 77,900, according to seasons, etc. The number of firms with profit sharing schemes at the corresponding period of 1909, according to the latest available information, was 65, with 83,232 to 76,763 employees.

Changes in Wages.

The number of workpeople reported as affected by changes in rate of wages in 1910 was 534,119, of whom 381,244 received net increases amounting to £15,761 per week, and 132,456 sustained net decreases amounting to £1,870 per week. The remaining 20,419 had upward and downward changes, which left their wages at the same level at the end as at the beginning of the year. The net result of all the changes taking place during the year was thus an increase computed at £13,891, as compared with a reduction of £69,212 per week in 1909. Over the 15 years, 1896 to 1910, the aggregate of the net increases exceeds that of the net decreases by £341,753 per week.

Changes in Hours.

The changes in weekly hours of labour taking effect in 1910 affected 21,409 workpeople. Of these 3,068 had their aggregate working time increased by 5,414 hours per week, and 18,341 had reductions amounting to 43,393 hours per week.

Labour Disputes.

The number of trade disputes causing a stoppage of work in 1910 was 506, involving directly and indirectly 508,538 workpeople, with an aggregate duration of nearly 9,750,000 working days.

Unemployed.

In the 415 Trade Unions, with a net membership of 700,665, making returns, 34,834, or 5 per cent., were reported as unemployed at the end of December, 1910, as compared with 6.6 per cent. at the end of December, 1909.

Industrial Diseases.

During the twelve months of 1910 the total number of cases of lead and other poisoning and of anthrax in factories was 574, as compared with 625 in 1909. The number of deaths was 48 in 1910, as compared with 42 in 1909. In addition, there were 232 cases of lead poisoning, including 35 deaths, among house painters and plumbers during 1910, as compared with 241 cases, including 47 deaths, during 1909.

Fatal Industrial Accidents.

During the twelve months of 1910 the total number of workpeople reported as killed in the course of their employment, exclusive of seamen, was 3,344, as compared with 2,869 in 1909. The total number of seamen killed during the same period was 1,102 in 1910 and 1,152 in 1909.

AUSTRIA.

Trade Union Membership.

Die Gewerkschaft, the journal of the Central Committee of Austrian Social-Democratic Trade Unions, gives statistics of the workmen's organizations affiliated to that body in 1909. The total number of federated trade unions 4,450, consisting of 52 central or national unions, 27 district unions and 4,371 local unions; in 1908 the total was 4,618, of which 51 were national, 48 district, and 4,519 local. At the end of 1909 the aggregate members of these trade unions was 415,256, compared with 447,227 at the end of 1908. During the year there had, therefore, been net decreases of 3.6 per cent. in the number of unions and of 7.1 per cent. in the membership. The total receipts of the unions in 1909 amounted to £354,068 and the total expenditure to £343,128, the corresponding figures for 1908 being £368,998 and £330,193, respectively. The receipts in 1909 consisted chiefly of the ordinary contributions of members, which amounted to £307,342, while the principal items of expenditure (apart from the cost of administration, £63,996) were unemployment and travelling benefit, £71,443; cost of journal, £39,137; sick and infirmity benefit, £51,092; funeral and special distress benefits, £31,290; and propaganda and organization, £33,027. At the end of the year the funds of the unions amounted to £407,246, compared with £397,125 at the end of 1908. The foregoing figures are exclusive of sums collected and distributed by the unions in support of persons on strike or locked out, a benefit for which no formal provision is made in the rules of these trades unions.

GERMANY.

Trade Union Membership.

The total membership of trade unions in the German Empire in 1909, according to statistics recently compiled by the Imperial Statistical Office, was 3,597,259. More than half of these, viz., 1,832,667, belonged to unions known as "Gewerkschaften," which are affiliated to a central body at Berlin and are identified with the social-democratic movement. Other important groups of unions were the "Christian" unions with 270,751 members, and the "Hirsch-Duncker" unions with 108,028. In addition there were "Patriotic" unions with 24,657 members, "Yellow" unions with 71,346, Roman Catholic or Protestant unions with 635,570, and independent or unattached unions with 64,240 members. The aggregate membership of the three chief groups mentioned above has risen from 858,942 in 1901 to 2,211,446 in 1909, an increase of 157 per cent.

SWITZERLAND.

Women in Industrial Courts.

Under article 4 of the Geneva Constitutional Law of 1882, employers, employees and workpeople of the male sex only were qualified as electors and as members of the Courts established in that Canton for the settlement of disputes between workpeople and their employers and known as "Tribunaux de Prud'hommes." This has been amended by a new law which provides that employers, employes and workpeople of either sex are eligible if they are of Swiss nationality, are over 20 years of age and reside in the Canton of Geneva. The new law was submitted to the referendum in February last and has now received the sanction of the Federal authorities in a decree dated June 20th, 1910.

CITIES IN ONTARIO.

Names of Mayors from Date of Incorporation to the Year 1911.

BELLEVILLE, INCORPORATED 1878.

Alexander Robertson 1878-9
R. S. Patterson 1880-1
Nelson Lingham 1882-3
Jas. W. Dunnett 1884-5
H. McIninch 1886
W. H. Biggar 1887
Dr. B. S. Wilson 1888
W. J. Diamond 1889
George S. Tickell 1890
E. Guss Porter 1891
C. Bogart 1892
F. S. Wallbridge 1893
J. E. Walmsley 1894-5-6
J. W. Johnson .....1897-8-9-'0
R. J. Graham 1901-2-3
W. W. Chown 1904
Chas. N. Sulman 1905-6-7
A. McFee 1908
L. W. Marsh 1909-10
H. W. Ackerman 1911

BRANTFORD, INCORPORATED 1877.

James W. Digby, M.D. 1877
Robert Henry 1878-9
Reginald Henwood, M.D. 1880-1
William Watt 1882-3
W. J. Scarfe 1884-5
C. B. Heyd 1886
Robert Henry 1887
C. B. Heyd 1888-9
S. G. Read 1890-1
Levi Secord, M.D. 1892-3
George Watt 1894-5
Thomas Elliott 1896-7
W. G. Reymond 1898-9
H. Cockshutt .....1899-'0
D. B. Wood 1901-2
M. K. Halloran 1903-4
C. H. Waterous 1905-6
J. W. Bowlby, K.C. 1907-8
W. Burrows 1909
W. B. Wood 1910
R. A. Rastell 1911

CHATHAM, INCORPORATED 1895.

Manson Campbell 1895-6
Henry Smyth 1897
H. A. Patterson 1898
T. A. Smith .....1899-'0
G. W. Sulman 1901-2
W. E. McKeough 1903-4
George W. Cowan 1905
W. S. Marshall 1906
Wm. Stone 1907
Thos. Scullard 1908
W. H. Westman 1909
Charles Austin 1910
R. L. Bracken 1911

FORT WILLIAM, INCORPORATED 1907.

James Murphy 1907-8
L. L. Peltier 1909-10
Samuel Crawford Young 1911

GUELPH, INCORPORATED 1879.

George Howard 1879
George Sleeman 1880-1-2
Caleb Chase 1883-4
Wm. Stevenson 1885-6
A. H. Macdonald 1887-8
Thomas Gowdy 1889-90
Thomas Goldie 1891
Thomas Goldie)
George Sleeman) 1892
W. G. Smith 1893-4
John A. Lamprey 1895-6
James Hewer 1897-8
R. E. Nelson .....1899-'0
John Kennedy 1901-2
John H. Hamilton 1903-4
George Sleeman 1905-6
John Newstead 1907-8
G. Hastings 1909-10
G. J. Thorp 1911

HAMILTON, INCORPORATED 1847.

Colin C. Ferrie 1847
Geo. C. Tiffany 1848
W. L. Diston 1849
John Fisher 1850
John R. Holden 1851
Nehemiah Ford 1852
W. G. Kerr 1853
James Cummings, 3 months....1854
Chas. Magill, 9 months 1854-5
Jas. Cummings 1856
John F. Moore 1857
Geo. H. Mills 1858
Henry McKinstry 1859-60-1
Robt. McElroy 1862-3-4
Chas. Magill 1865-6
Benjamin E. Charlton 1867
Hutchinson Clark 1868
Jas. E. O'Reilly 1869
George Murison 1870
D. B. Chisholm 1871-2
Benjamin E. Charlton 1873-4
George E. Roach 1875-6
F. E. Kilvert 1877-8
Jas. E. O'Reilly 1879-80-1
Chas. Magill 1882-3
J. J. Mason 1884-5
Alex. McKay 1886-7
Wm. Doran 1888-9
David McLellan 1890-1
Peter C. Blaicher 1892-3
A. D. Stewart 1894-5
Geo. E. Tuckett 1896
Ed. A. Colquhoun 1897-8
J. V. Teetzel .....1899-'0
John S. Hendrie 1901-2
W. J. Morden 1903-4
S. D. Biggar 1905-6
T. J. Stewart 1907-8
J. I. McLaren 1909-10
G. H. Lees 1911

KINGSTON, INCORPORATED 1846.

John Counter 1846
Thomas Kirkpatrick 1847
William Fore, Jr. 1848
Francis Manning Hill 1849
John Counter 1850
Francis Manning Hill 1851
John Counter 1852-3
John Flannagan 1854
John Counter 1855

Names of Mayors.—*Continued.*

KINGSTON.—*Continued.*

O. S. Gildersleeve 1856
George Davidson 1857
John Flannagan 1858
O. S. Strange .....1859-'0
O. S. Gildersleeve 1861-2
John Creighton 1863-4-5
John Bredin 1866-7-8
William Robinson .....1869-'0
Arch. Livingston 1871
S. T. Drennan 1872
H. Cunningham 1873
Michael Sullivan 1874-5
Byron M. Britton 1876
John McKelvey 1877
John McIntyre 1878
C. F. Gildersleeve 1879
Robert J. Carson 1880
E. J. B. Pense 1881
John Gaskin 1882
Charles Livingstone 1883
Jas. McCammon 1884
Edw. H. Smythe 1885
John L. Whiting 1886
John Carson 1887
Jas. D. Thompson 1888-9
W. M. Drennan 1890-1
D. M. McIntyre 1892
N. C. Polson 1893
John Herald, M.D. 1894
Clark W. Wright 1895
Robert F. Elliott 1896
J. S. Skinner 1897
C. Livingstone 1898
E. Ryan, M.D. 1899
J. A. Minnes 1900
R. E. Kent 1901
J. M. Shaw 1902
J. H. Bell 1903-4
R. N. F. McFarlane 1905
J. McDonald Mowatt 1906-7
A. E. Ross, M.D. 1908
D. Cooper 1909-10
C. J. Graham 1911

LONDON, INCORPORATED 1855.

Murray Anderson 1855
William Barker 1856
Elijah Leonard 1857
David Glass 1858
William McBride 1859
James Moffatt 1860
F. E. Cornish 1861-2-3-4
David Glass 1865-6
Frank Smith 1867
Wm. S. Smith 1868
John Christie, S. H. Graydon 1869
S. H. Graydon 1870
J. M. Cousins 1871
John Campbell 1872
A. McCormick 1873
Benjamin Cronyn 1874-5
D. C. McDonald 1876
Robert Pritchard 1877
Robert Lewis 1878-9
John Campbell 1880-1
E. Meredith 1882-3
C. S. Hyman 1884
Henry Beecher 1885
T. D. Hodgins 1886
James Cowan 1887-8
George Taylor 1889-90-1
W. M. Spencer 1892
E. T. Essery 1893-4
John W. Little 1895-6-7
John D. Wilson, M.D. 1898-9
Frederick G. Rumball 1900-1
Adam Beck 1902-3-4
Cl. T. Campbell, M.D. 1905
J. C. Judd 1906-7
Sam Stevley 1908-9
J. H. A. Beattie 1910-11

NIAGARA FALLS, INCORPORATED 1903.

George Hannan 1903-4
Wm. Phemister 1905
Robert P. Slater 1906-7
R. F. Carter 1908
R. P. Slater 1909
O. E. Dores 1910-11

OTTAWA, INCORPORATED 1854.

J. B. Lewis 1855-6-7
Edward McGillivray 1858-9
Alexander Workman 1860-1-2
Henry J. Friel 1863
M. K. Dickenson 1864-5-6
Robert Lyon 1867
Henry J. Friel 1868-9
John Rochester 1870-1
E. Martineau 1872-3
J. P. Featherstone 1874-5
G. B. L. Fellows 1876
W. H. Waller 1877
C. W. Bangs 1878
C. H. Mackintosh 1879-80-1
P. St. Jean 1882-3
C. T. Bate 1884
Francis McDougal 1885-6
McLeod Stewart 1887-8
Jacob Erratt 1889-90
Thos. Birkett 1891
Olivier Durocher 1892-3
George Cox 1894
Wm. Borthwick 1895-6
Samuel Bingham 1897-8
Thos. Payment .....1899-'0
W. D. Morris, Jas. Davidson 1901
Fred Cook 1902-3
J. A. Ellis 1904-5-6
D'Arcy Scott 1907-8
C. Hopewell 1909-10-11

PETERBOROUGH, INCORPORATED 1905.

Henry Best 1905-6
R. F. McWilliams 1907
Harry Rush 1908-9
W. G. Morrow 1910-11

PORT ARTHUR, INCORPORATED 1907.

G O. P. Clavet 1907
J. J. Carrick 1908
I. Matthews 1909-10
Col. Ray 1911

Names of Mayors.—*Concluded.*

STRATFORD, INCORPORATED 1885.

William Jordan 1885
Chas. J. McGregor 1886-7
Henry S. Butler 1888-9
John Brown 1890-1
Elijah Hodgins 1892
John C. Monteith 1893-4
Wm. Davidson 1895-6
John O'Donoghue 1897-8
James Hodd .....1899-'0
James Stamp 1901-2
William Hepburn 1903-4
W. J. Ferguson 1905-6
Wm. Gordon 1907-8
D. S. Dingman 1909-10
John Brown 1911

ST. CATHARINES, INCORPORATED 1876.

Calvin Brown 1876
Lucius S. Oille 1878
Henry Carlisle 1879
Patrick Larkin 1882
R. H. Smith 1884
Henry A. King 1885
John E. Cuffe 1887
John B. McIntyre 1889
Edwin Goodman 1891
Donald Robertson 1893
John C. Rykert 1895
Wm. B. Gilleland 1897
M. Y. Keating 1899
John B. McIntyre 1901
Wm. B. Burgoyne 1903
A. W. Marquis 1904
Theo. Sweet 1905
Andrew Riddell 1906-7
John S. Campbell, Col.....1908-9
J. M. McBride 1910-11

ST. THOMAS, INCORPORATED 1881.

W. C. VanBuskirk 1881-2
E. W. Custin 1883
E. Horton 1884-5
J. E. Smith 1886
John Midgely 1887-8
Israel Morse .....1889-'0
Robert McCully 1891-2
George L. Oill 1893-4
W. E. Idsardi 1895-6
F. W. Wright 1897-8
P. Meehan .....1899-'0
S. Chant 1901-2
C. F. Maxwell 1903-4
Thomas Meek 1905
Calvin Lawrence 1906-7
Geo. Geddes 1908-9
Fred. Guest, M.D. 1910-11

TORONTO, INCORPORATED 1834.

William Lyon Mackenzie 1834
Robt. Baldwin Sullivan 1835
Thos. D. Morrison 1836
George Gurnett 1837
John Powell .....1838-9-'0
George Munro 1841
Hon. Henry Sherwood, Q.C.....1842-3-4
Wm. H. Boulton 1845-6-7
George Gurnett .....1848-9-'0
John G. Bowes 1851-2-3
J. G. Beard, J. B. Robinson... 1854
G. W. Allan 1855
J. B. Robinson 1856
John Hutchinson 1857
W. H. Boulton, D. B. Read, Q.C... 1858
Adam Wilson, Q.C.....1859
Adam Wilson, Q.C., John Carr, Pres.... 1860
J. G. Bowes 1861-2-3
F. H. Medcalf 1864-5-6
James E. Smith 1867-8
S. B. Harman 1869
S. B. Harman, G. D'Arcy Boulton, Pres. 1870
Joseph Sheard 1871-2
Alexander Manning 1873
F. H. Medcalf, John Baxter, Pres... 1875
Angus Morrison, Q.C.....1876
Angus Morrison, Q.C., P. G. Close, Pres..... 1877
Angus Morrison, Q.C.....1878
James Beatty, Jr., Q.C. 1879-80
W. B. McMurrich 1881-2
A. R. Boswell 1883-4
Alexander Manning 1885
W. H. Howland 1886-7
E. F. Clarke 1888
E. F. Clarke, John McMillan, Pres.. 1899
E. F. Clarke 1890-1
R. J. Fleming 1892-3
Warring Kennedy 1894-5
R. J. Fleming 1896
R. J. Fleming, John Shaw 1897
John Shaw 1898-9
E. A. Macdonald 1900
O. A. Howland 1901-2
Thos. Urquhart 1903-4-5
Emerson Coatsworth 1906-7
Joseph Oliver 1908-9
G. R. Geary 1910-11

WEST TORONTO, INCORPORATED 1908.

A. W. Baird 1908-9
(United with Toronto City 1909.)

WINDSOR, INCORPORATED 1892.

O. E. Fleming 1892-3
J. H. Beattie 1894
D. Willis Mason 1895-6
John Davis .....1897-8-9-'0-1
J. F. Smythe 1902
J. W. Drake 1903-4-5
Ernest S. Wigle 1906-7-8-9
J. W. Hanna 1910-11

WOODSTOCK, INCORPORATED 1901.

John Mearns 1901-2
John White 1903-4
James S. Scarff 1905
John Butler 1906-7
R. G. Sawtell 1908-9
J. S. Scarff 1910-11